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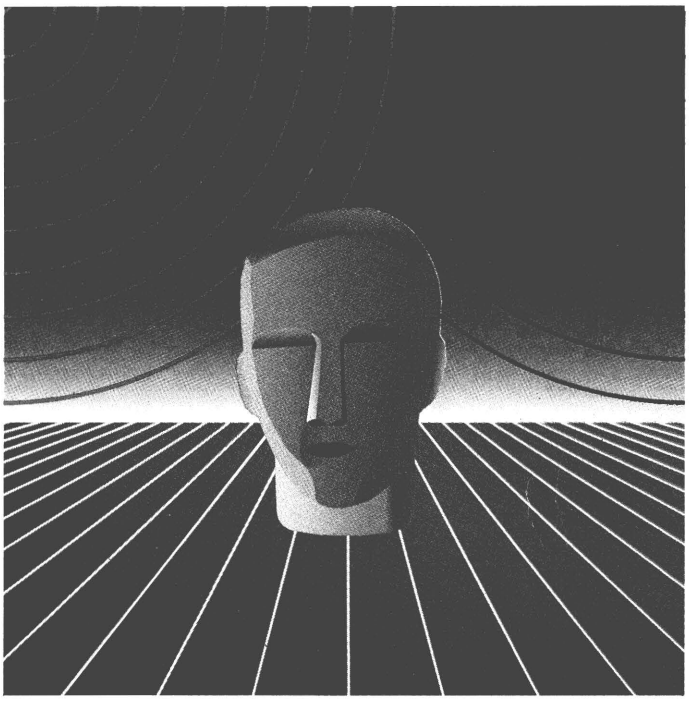
Education + Training = the keys to the future



Vocational training

Vocational Training

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Contents

Dear Readers,

Man's stock of knowledge is constantly growing. With science advancing at ever-increasing speed in every sphere, cultural and social life in modern society is changing radically.

How, then, is the 'citizen' to be educated, in what is he or she to be trained to be a match for this process of change, with whose scale and speed the cycle of the 'alternation of generations' can no longer keep pace, for the first time in history? The individual is thus forced at the beginning of his or her social life to acquire a new type of knowledge, but above all he must learn to change and to develop in a way that allows him to keep his knowledge and attitudes up to date.

In view of these developments, which represent a break with the past, education and vocational training are also responsible for guaranteeing the principle of 'equal opportunities for all'.

This being the case, is there any point at all in maintaining the distinction between education and training?

In most Member States this distinction persists, especially at the level of the administration, but also in the goals and content of learning.

To circumscribe the two terms rather more accurately, education is defined here as the first few years a child or young person spends at school (about nine, depending on the country). There then follows training, comprising a number of different routes under the responsibility of different ministeries and/or other institutions.

No attempt will be made here to discover how education and training are governed by the various laws in the various Member States with a view to inferring demands for radical reforms. On the contrary, it must be realized that the system in each Member State of the Community has its own evolutionary logic, and the aim must be to investigate the sensitive spots which impede the continuing development of the system or, on the other hand, may be points of departure for the promotion of its continuing development.

This problem is not new, and it has unsettled the political history of all European countries.

This edition of the Bulletin seeks to spark off a process of reflection on the interdependence in the relationship between general education and vocational training, with the lines of development of this interdependence in a changing society similarly examined.

The enlargement of the set of instruments available to those who 'educate and train' to include the new technologies will have, or is already having, very serious structural implications for the institutional framework of the education and training system. These implications also extend to the way in which both are managed and administered.

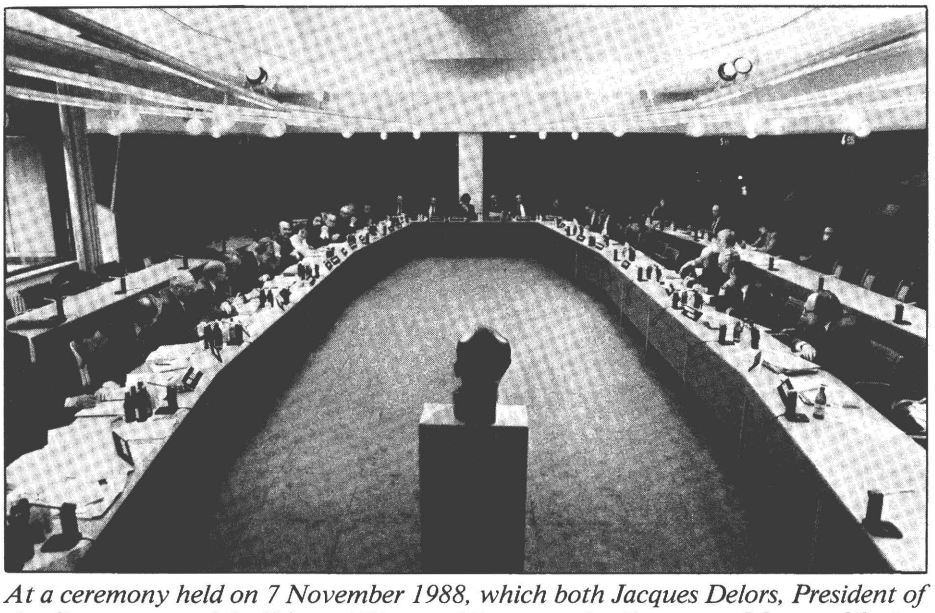
The principle of equality of opportunity is not confined to ensuring access to all training courses: it also calls for action to make the system more flexible so that it can help everyone (or at least very many more people than today) to succeed in his or her training.

In recent years all branches of the economy and all spheres of social life, all production and service sectors have been affected by the rapid development of methods and production techniques. They have been confronted with problems that have necessitated a thorough review both of products and services and of the way in which they are manufactured or provided.

The world of education and training today faces similar problems.

In other words, the goal must be new kinds of training facilities, with trainers whose occupational profile is also new.

The line dividing edcuation and training in the forms they still commonly take must increasingly be 'bridged' through better cooperation and joint initiatives. The first bridges of this kind are already being built at local, regional, national and European level.



At a ceremony held on 7 November 1988, which both Jacques Delors, President of the Commission of the EC, and Eberhard Diepgen, the Governing Mayor of Berlin, attended, the CEDEFOP building was named 'Jean Monnet House'. A bust of Jean Monnet was unveiled. The date 9 November 1988 marks the 100th anniversary of the birth of Jean Monnet.

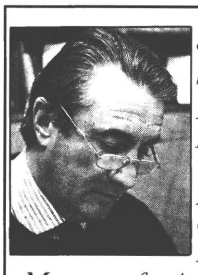
Ernst Piehl
Director of CEDEFOP

Interview with Jean-Pierre Soisson

In Europe, when talking about vocational training in France, we mainly have continuing training for adults in mind. There is generally not much known about your initial training system. The impression one has is that for decades those responsible for training policy in France were more concerned with continuing training, and that initial training was somewhat neglected for a long time. Would you agree with this statement?

I am glad to hear you say that the French continuing training system has gained a certain reputation in Europe. It is, I believe, a good system. It has gone through a number of changes since the inter-occupational agreements of 1970 and the Law of 1971. Experience has shown that the system lends itself to improvement and adaptation because the original concept was a good one. Having said this, I would not say that initial training has been neglected during all this time! Quite the contrary, it has been a major concern in France for several years now.

In his novel *Emile,* published in 1762, Jean-Jacques Rousseau had his hero learning the carpenter's trade. Today, some people would say that in so doing Rousseau wanted to upgrade craft trades in the eyes of society and counteract the prejudice nurtured by the privileged classes against people who work with their hands. At the time, in France as elsewhere, apprenticeship was still the main channel of training for a job. The French Revolution abolished the guilds, and the Law of 1791 marked the beginning of a crisis in France, not only in apprenticeship but in training in general. Vocational education managed to develop, but apprenticeship has never really weathered this crisis. Why is this so?



Jean-Pierre Soisson

Minister of Labour, Employment and Vocational Training, Magistrate at the Court of Accounts, Former Minister, Mayor of Auxerre, Member of Chamber of Deputies for Yonne.

Apprenticeship is a time-honoured way of training for a job, but for a long time it was not recognized as a training route in its own right, as a form of training on a par with the vocational education imparted in the secondary school.

It was seen as a lower channel of training, reserved for young people who had failed at school. Because of the links apprenticeship developed between the world of education and the working world, some people even considered that it might place young people at risk in that they could be exploited as cheap labour by their employers. This attitude is now more or less a thing of the past. The value of apprenticeship in educational terms and in the ease with which it can be adapted to produce the skills that employers need is now recognized.

In general it is technical training itself, whether provided through apprenticeship or through vocational education, which has been held in far lower esteem than the more classic courses of studies leading to much higher levels of skill. This is undoubtedly due to a historic and cultural tradition specific to France. You are right, working in an office rather than on the shop floor used to be held in higher esteem. We have no doubt rated our 'blue-collar workers' lower than ou 'white-collar workers', and often we have paid them less well. This was a mistake.

This trend was also accentuated by the massive immigration of the 1960s.

This undoubtedly explains some of the difficulties we are now encountering as we try to modernize our economy and retrain many wage-earners in industrial sectors in decline.

Since the late 1970s, the alternance training formula has been gaining ground in France. Learning a trade is increasingly associated with practical work. Has this development occurred more for educational reasons, or does the explanation for the success of the formula lie in factors linked to employment policy?

The alternance idea has in fact gained momentum in France since the early 1980s. It is a concept that has gained acceptance today as normal practice, I would say.

Most initial and continuing training, at almost every level, now includes work experience in industry. Since 1983, a special type of contract of employment has been available to people aged under 26, the *contrat de qualification,* a 'skill contract'. It is very similar to articles of apprenticeship, but more flexible in its mode of organization. About 40 000 to 50 000 young people currently work under this kind of contract every year.

The reasons for the development of alternance training are manifold and involve teaching considerations just as much as socio-economic factors. I regard this not as a contradiction but as a complement.

Alternance training is not a solution to all our training problems! What it does is to create a coherent link between the world of training and the world of industry, in which each party contributes its share to the educational process and at the same time draws some benefit from it. It's not that easy — a good deal has been written on the subject! For the student or young trainee alternance training can be an opportunity to try out newly acquired skills in real life, to reinforce what has been learned and to expand on that learning. The trainer must be able to find ways of

enriching the content of his or her teaching by taking advantage of this proximity to the workplace. The employer has to reconcile the educational function with a new policy for the management of human resources, for example. Alternance training has to be negotiated in each individual case. Only if this is done can the arrangement be to the mutual advantage of both parties.

In 1987 the French Chambers of Commerce and Chambers of Crafts launched a nationwide campaign to promote apprenticeship and improve its image in the eyes of the French, attract more young people to this type of training and persuade more firms to offer apprenticeships. The government is backing the campaign and has reformed the apprentice training system. What could the reason be for this revival of the apprenticeship system?

In July 1987, French Parliament passed an act reforming the apprenticeship system.

As you point out, the purpose of the law was to modernize and upgrade the image of apprenticeship, making it a training route in its own right with recognition as such.

The government backed this law with substantial financial support measures. The purpose of all this legislation and financial backing was to raise the quality of the training imparted, especially by improving trainers' qualifications. Another important factor in the reform has been that young people in apprenticeship can now work for diplomas as qualified technicians, a measure that should add to the value of this type of training in the eyes of large companies.

Without wanting to advertise any firm in particular, I should nevertheless like to point out that Nixdorf-France, a subsidiary of the leading German computer group, immediately perceived the value of this law and set up apprenticeship sections in cooperation with a Chamber of Commerce in the region of Versailles. I hope that the leading French companies will follow suit!

There are many reasons for this revival in apprenticeship. I can identify three main reasons:

If you had to advise your children (or other young people) to train for an occupation, what would you recommend?

To some extent at least, the choice of the subject one studies should depend on what the individual enjoys doing; however the opportunities in later life for actually using what one has learned should not be completely left out of consideration. University studies will increasingly only be of value if they also lead to a really good command of a language. Students should therefore spend a few semesters abroad. Another factor on which success at university and in employment depends is willingness not to adjust but to get to the bottom of things.

Edzard Reuter

Chairman of the Board, Daimler-Benz AG

■ **A growing awareness of the effectiveness of an alternance training system which, for all its shortcomings, has proved its worth over the years.**

■ **A growing awareness that, faced with today's enormous needs, it is better to adapt than disrupt when it comes to education. It is better to build on a system that is known to be solid and properly tested than to develop a completely new system. Apprenticeship, despite its shortcommings, had another advantage — it is a training system familiar to many families and employers.**

■ **Finally — and I believe this is the main reason — there is the interest shown by local authorities in apprenticeship. You no doubt know that since 1983 France has been going through a period of major reform in matters of decentralization. Continuing vocational training and apprenticeship were among the first systems to be decentralized to regional level. There are now 26 Regional Councils in France, elected by universal suffrage since 1984 with extended responsibilities. I myself am an elected member of the Regional Council for Burgundy, and I have always been keenly interested in the problems of training and apprenticeship. Wine is not the only reason justifying the fame of the Burgundy region throughout Europe! Its achievements in the reform of apprenticeship are just as admirable.**

On the other side of the Rhine, in Germany, there are at least five times more apprentices than in France. Has the example set by your German neighbours had any influence on the modernization of apprenticeship in France?

Yes it has, we have been inspired by the example of our German neighbours when it comes to apprenticeship. More precisely, I would say that it is the spirit, rather than the letter of Germany's dual system which has inspired us.

I would, however, draw your attention to the problems of 'translation'! Even though the French apprenticeship system is the one closest to the German 'dual' system, one should not compare things unless they are really comparable. One cannot compare the 240 000 French apprentices with the 1.7 million German apprentices. Germany's dual system embraces what we in France call technical and vocational education as a whole. Apart from our apprentices, we should count all the pupils attending the technical and vocational lycées which fall under the competence of the Ministry of Education.

This makes the numbers comparable, and in fact they are equivalent. The channels of training for which the Ministry of Education is responsible are increasingly including alternating training elements.

It is in this broader sense that we have been influenced by the German system.

The quality of training in a company reflects the quality of the company imparting this training. In French companies, there is no tradition of inital vocational training, which basically takes place in the school. How shall employers be prepared for their new role as trainers and how can they be motivated to take on this role?

The situation in France is not so cut and dried as you seem to imply!

We have a very real tradition of cooperation between the world of

education and trade and industry, and this has taken and still takes many forms.

If you had to advise your children (or other young people) to train for an occupation, what would you recommend?

I don't think it is useful to advise young people too dogmatically on training for specific occupations. Generic literacy, numeracy and computer skills together with a disciplined approach to learning and problem-solving are critical career building blocks for all young people. Occupation-specific training in that context is mainly important in the education-to-work transition but may be very much less important in terms of a person's lifetime career.

Niall Greene

Niall Greene was Chief Executive of the Youth Employment Agency in Ireland from 1982 to 1985 and Chairman of its Board in 1985/86. He was Chairman of the Council of AnCo — the Industrial Training Authority from 1984 to 1986.

The tradition is perhaps less ingrained than elsewhere, but it does exist! We are not starting off from scratch!

As examples, I would cite the concept of diplomas and the updating of these diplomas, the elaboration of general guidelines for vocational training courses and representation on examining boards. These are subjects on which trainers and representatives of the authorities and of trade and industry (unions and employers' associations) have been working together for a long time.

The world of agricultural training has a long-standing tradition of alternance training. Similarly, there have been many company schools (coal mines, car manufacturers, electricity companies, etc.), without counting apprenticeship which we have just been discussing. New schemes are launched every day: the twinning of secondary schools and local companies, the provision of all kinds of work experience shemes, etc.

Even so, I freely admit that we still have a great deal to do. But the main thing has been achieved: nowadays no one questions the employer's role as a trainer and the employer has gradually become aware of his or her responsibilities in matters of education.

The State is backing these efforts towards collaboration by, for example, offering tax incentives or providing training for instructors.

School-based vocational training is also undergoing major changes in France. About 441 000 young people sat for their baccalaureate this year, 8 900 of these in vocational streams. This is almost eight times more than last year. These 8 900 candidates did not prepare the examination at the traditional type of lycée — but in vocational lycées, training centres and within the context of continuing training. What do you feel about this trend?

I feel it is very positive. You are no doubt aware of the prestige attached to the baccalaureate in France. The fact that vocational education can now lead to a diploma called a 'baccalaureate' gives it great prestige. The fact, moreover, that you can work for this diploma through different routes, including apprenticeship and continuing vocational training, also provides a higher degree of social recognition for these new channels of training.

In conjunction with the Chambers of Commerce and the Chambers of Crafts, the French Government is conducting a campaign to promote education and training for more vocational purposes, more rooted in practice. For their part, more and more employers are encouraging employees who would like to take a vocational baccalaureate. These two trends are not of course contradictory, but would it not be more logical to plan forms of training combining the two aspects, leading to a diploma of both a practical and a general nature?

I wonder whether the time has not now come to discard this idea of the conflict between general education and vocational training. What are employers looking for today? They are looking for young workers suitably trained for a job, of course, but also for young people who can adapt to changing trends in jobs in the longer term. To have 'adapted' is no longer sufficient nowadays, one also has to be 'adaptable'. The introduction of vocational baccalaureates, for examples, is in fact one response to this new type of question.

Up to now, the concept of integrating vocational training with general education has not really been put into practice in any European Community Member State. This dual qualification is offered only by projects that are in the form of pilot schemes. Italy may be an exception, in that people with a vocational education diploma automatically have access to higher education. Is this form of integration likely to happen in France, in your opinion?

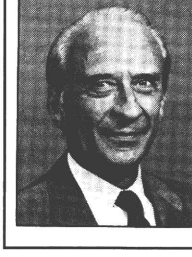
The vocational baccalaureate, like all other types of baccalaureate, gives access to higher education, even though in practice it is more directly 'job-oriented'.

If you had to advise your children (or other young people) to train for an occupation, what would you recommend?

First I would advise them to make sure that they have the basic intellectual skills, above all in their reading and in computer literacy.

Then I would advise them to opt for a course that offers the broadest, the most multi-skilled training, since this is what employers of the future will look for first; specific training will serve for an average of at most seven years and will be acquired at the workplace.

'Finally I would advise those young people who have the ability and the capacity to do so to go to university. By the year 2000, a university education will be required for over a third of jobs.'



Professor G. De Landsheere

Member of the International Academy of Education and of the Academia Europaea

Laurie Sparham/NETWORK

This being so, the updating of training is in fact a major issue for the future.

European educational systems are faced with a multiplicity of challenges.

Looking just at France, I would like to mention our basic concerns today:

■ We want to substantially improve the standard of education and training of the whole French population. This is an economic necessity and a moral obligation for a democracy like ours.

Our President, François Mitterrand, has expressed his wholehearted support for the goal that everyone should have the right to be trained. Young or adult, jobless or in employment, everyone must be in a posistion to acquire training and recognition of this training at some time or other, according to his or her needs, abilities and situation. This is an ambitious goal which will take us several years to achieve.

The government has already taken major financial decisions for 1989 in order to reach this goal. Young people will be given priority. The Education Ministry and my own ministerial department, the Ministry of Labour, Employment and Vocational Training, are in the vanguard of this movement.

Here again, we are not starting from scratch! We are essentially trying to improve existing resources, to ensure that they are adequate in number and in quality and to make them flexible and individualized. Every young person will have to have his or her training recognized by a diploma or comparable certificate. We shall also make substantial efforts to improve the training of trainers.

Arrangements for adult training are also being planned. Major training programmes aimed at the long-term unemployed have been launched, for this is a particularly vulnerable group.

■ This massive development in training which we hope to promote means that new methods of training will have to be implemented. Training should be more directed towards the individual, at the same time spreading the effects of educational action even wider. This is one of the aims of our efforts to develop multimedia training aids. For the second year running, we have launched an invitation to tender for the creation of multimedia training tools. We have helped to set up a foundation (Protee) to promote the production and use of such aids. Our goals are to a large extent the same as those of the European Comett programme: new technologies in the service of training.

In the longer term, a new sector specifically producing training aids is expected to develop. Since training needs are so enormous, both at individual and at company level, this industry should not take long to become profitable.

■ Finally, the development of in-company training. France needs to back the financial and technological modernization of its undertakings by social modernization.

Continuing vocational training has a very important role to play in this respect. This is something in which I take a very special interest. I would like to give you one example of action in this field. My predecessor set up a highly useful tax incentive arrangement called the 'tax credit'. Based on the idea of a tax credit for research, this arrangement rewards employers who make a special effort to train their employees. I recently proposed to the government that we should improve this arrangement to make it more attractive to employers who make a special effort to help low-skilled employees.

I really believe that training is an investment in the future.

My last question is of a fairly personal nature. If your children (or youngsters you know) had to choose a given vocational course and a job, what would you advise?

I have two children, aged 16 and 12. I try to help them do well at school. But under no circumstances would I make a choice on their behalf.

At the age of 20 I myself opted for the École nationale d'administration, whereas my father would have liked me to work for higher business studies (Hautes études commerciales). I would like my children to make their own free choice after the baccalaureate. But I shall put the right cards in their hands so that they can then make the right decision.

Education and training: Convergence on learning for the 1990s?

Let's start with three observations

In the 1980s small firms started using computers. Many people were amazed to find these computers being run by 16 to 18-year-old school-leavers, most of whom soon became the *de facto* director of finance. But people should not have been amazed. Education in all Member States has been undergoing a revolution and at its best can now produce young people unafraid of modern techniques and truly adaptable.

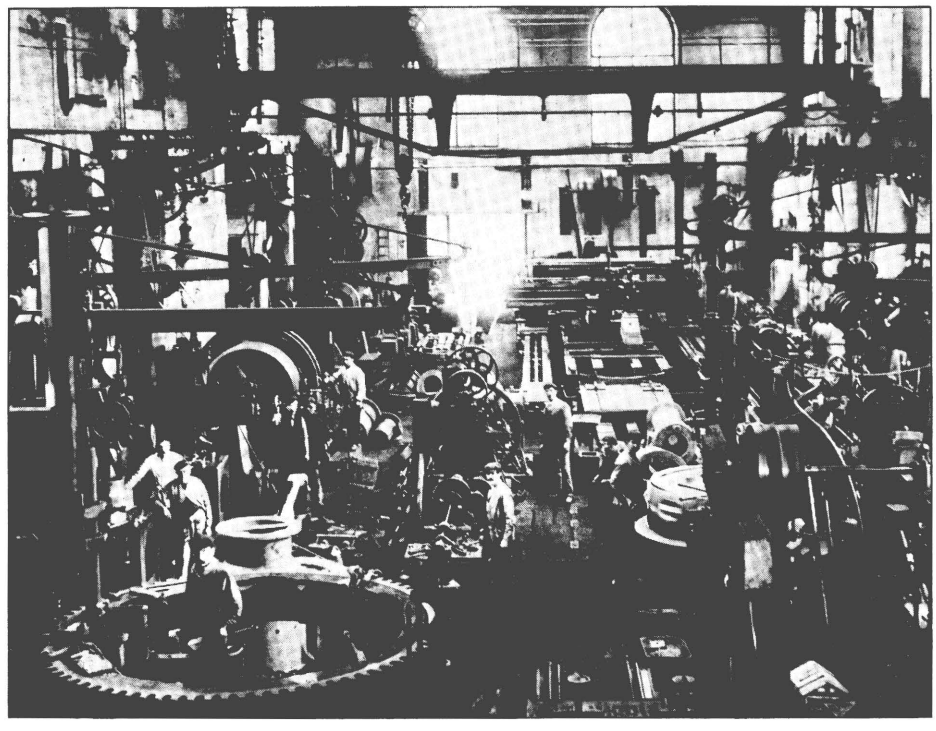
If historians will forgive the fuzzy logic of orders of magnitude, introducing agriculture took 10 000 years, introducing industry took 100 years, introducing information technology will take 10 years.

Information technology students graduating today from university will find that half their total knowledge is out of date in three years.

All these observations, in their separate ways, illustrate the point that technology is advancing so fast that in many fields it is impossible for a technologist to span the frontiers of knowledge across a whole subject. What becomes important for the technologist is to know how to access and assess this ever-expanding knowledge base. The same is true for technicians and other employees of applications of technology.

Dr Johnston

is Deputy Director-General of the Employment Department, the training agency responsible for youth and adult training and for influencing and improving vocational education in the United Kingdom.



Hulton Picture Company

For Europe, in a competitive global economy, this puts a huge premium on continuing education and training of employees.

But perhaps it should also cause us to stop and re-examine the whole nature of initial education and training.

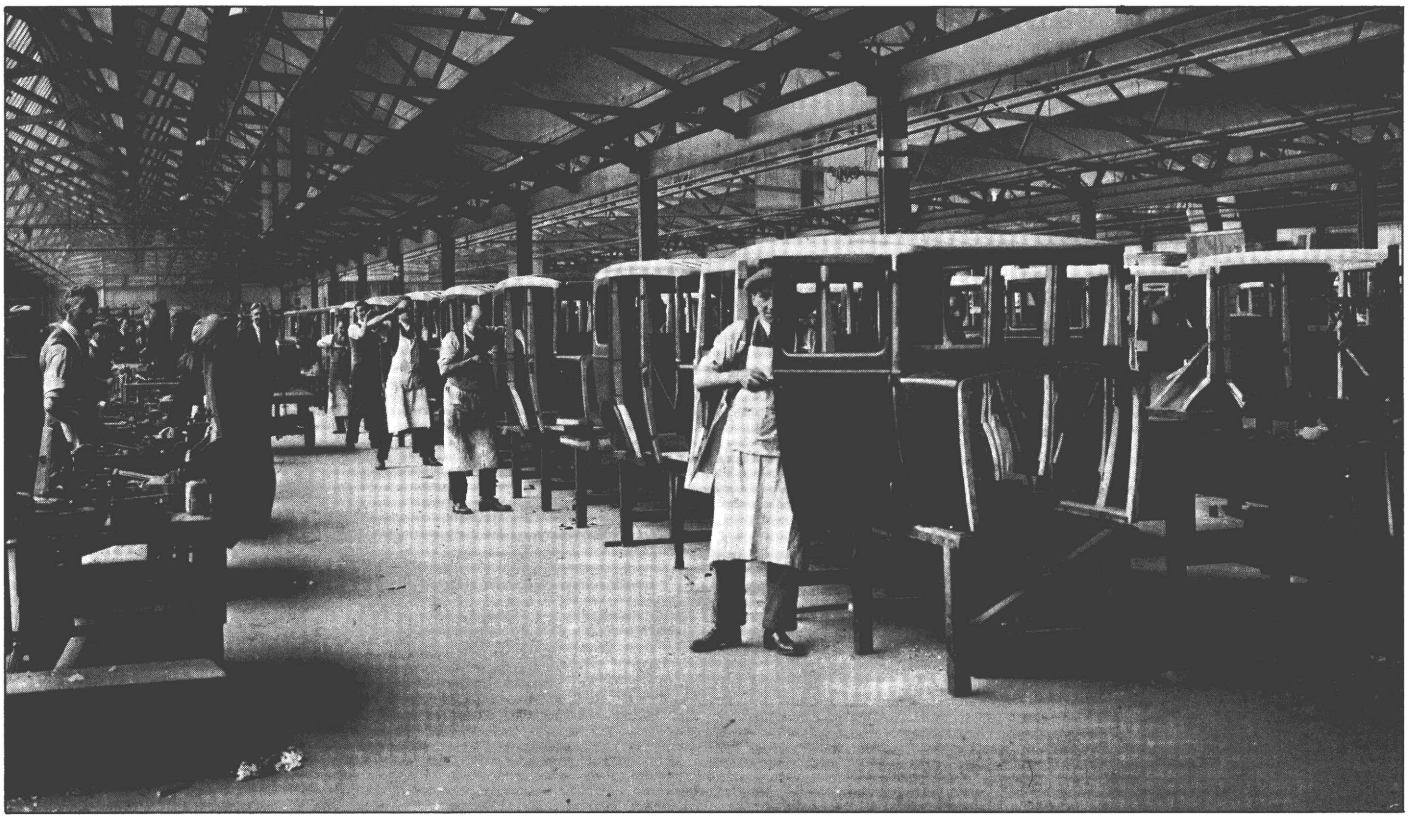
If the pace of change is now so fast, should we not put much more emphasis on learning how to learn, how to access information, how to problem-solve, and how to adapt and be flexible?

Moreover, the growth of the service sector puts much more emphasis on communications, on team-work and sometimes on personal initiative. The growth of small firms and self-employment requires enterprise. The development of home-based distance working requires particular communication skills and psychological stability.

The key question

So, if 'training' is primarily about developing such personal competences,

Employers, trainers and educationalists are increasingly putting greater emphasis on developing generic personal competences such as communication skills, personal effectiveness, and adaptability, as a means of preparing for a world of work in which the pace of technological change will require several job changes in the average career. This emphasis on learning rather than education or training, is bringing about increasing convergence in processes, methods, counselling, assessment and accreditation.



Paul POPPER LTD.

are we right to continue such a sharp divide between training and education in content, curriculum, methods, delivery, qualifications and administration?

The purpose of this article is to stimulate thought on the interdependencies between and growing convergence of education and training, and to identify a pattern of development emerging however faintly, in several Member States which provides a framework within which this convergence can take place.

Curriculum and methods

Education is about preparation for life, and our interest here is in preparation for working life. It is then rather odd that education has generally been kept separate from real life and working experiences.

Reversing this traditon there is now an encouraging trend, from age 14 upwards, in schools, colleges and universities, for young people to get direct opportunities to learn about the nature of the economy and the world of work. They do this through work experience, work shadowing, community projects, and even through running their own enterprises. These experiences are most effective when they are part of a structured and planned curriculum, not a haphazard exposure to work. In some countries this is formalized into fully integrated on- and off-the-job vocational education programmes. Of course, it does not have to be confined to pupils, teachers can benefit too.

The curriculum itself can be improved by setting national standards and by using every opportunity to relate education to the world of work by using real, local, contemporary examples wherever possible, and emphasizing real applications as opposed to theoretical concepts.

All these measures increase the relevance of the education process, and this in itself should raise motivation as young people feel and see themselves preparing for the adult world ahead.

Often such measures also help young people learn how to work with other people, in particular with adults. Project-based and other forms of participative learning methods and student-centred approaches are used to develop initiative, enterprise and leadership, as well as problem-solving skills and other aspects of personal development, especially communication.

Business-education contacts encourage employers to provide materials, equipment and opportunities for project and work experience, while setting standards of achievement for pupils rewarded by job guarantees.

The very technological advances in business and industry which demand the development of a 'thinking workforce' have been notably slow to reach the classroom or lecture hall. Flexible learning approaches using printed or electronic interactive formats which allow the learner to progress at his or her own pace and put the teacher/lecturer in the role of tutor/mentor, are now used in all sectors of industry for training and must surely now spread into traditional education. This has profound implications for the organization and management of the education process. Arguably this process is slowed by the monopoly position of many education providers.

Taken together with the goal of avoiding early vocational specialization, these curricula and methodological developments offer the opportunity of breaking down sex stereotyping by giving both sexes experiences in non-stereotyped occupations.

Accreditation

In some Member States a new technical vocabulary is emerging to describe the outcomes of the learning process in both education and training systems. (If recent Community level discussions are anything to go by, there is a crying need for CEDEFOP to produce an authoritative international lexicon!)

This vocabulary covers outputs not so much in terms of knowledge or content, but in terms of competences gained. They cover what an individual understands and can do, as opposed to what is known.

Many of the key competences discussed above are common to and underpin performance in both education and employment. These well recognized core or generic competences include problem-solving, learning technique, information handling, communication and personal effectiveness. Assessment and certification systems are developing to capture achievement in these areas, mainly by observing these competences practised in context.

In both education and training the gaining of these competences is increasingly continuously assessed and accredited, rather than putting all the emphasis on a final examination or end-test.

An individual lifetime record of achievement can be built up covering both generic and vocationally or academically specific competence gained through education, through training, or simply through experience. This list requires a means of accrediting experiential learning. Education providers wishing to play a major role in the continuing education and training of adult employees will need to develop such techniques if they are to remain credible with the adult employer/employee client group.

Guidance counselling and individual planning

Progression from education to training while at work is not an event but a process. Young people need help to make sensible and informed choices, particularly at the moment of vocational specialization. (Despite the importance of generic skills it is recognized that vocational competence remains a vital key to immediate success in the labour market!)

So increasingly the individual will pass from education to work, not only with a personal record of achievement, but ideally with some form of forward-looking plan for their continuing education and training. Since this plan will originate at the education end of the process, there will have to be close links between education and the training/employment world to ensure its relevance and deliverability.

Conclusion

In varying degrees the strands identified can be found in most Member States. This convergence of education and training now developing rapidly within our learning systems from a mutual recognition that only when education and training come together can we provide what might be termed an 'enabling' curriculum. That is one which provides attractive structured learning opportunities to enable people to maximize their potential for employment throughout their working life.

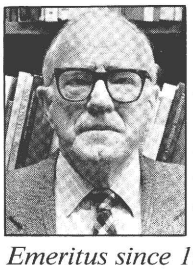
If successful we shall see a highly significant change in attitudes as learning rather than training or education becomes the focus for action. Learning will need to be supported by systems that no longer confine education to school, college or other institutions, and training to something that only happens after the ages of 16, 18 or 21. Rather what is needed is to provide a continuum which involves the full and directed partnership of employers and education towards a 'cut and come again' system in which the distinction fades and the efficiency and effectiveness of learning delivery is paramount. For many analysts this new 'jeu sans frontières' is not a game, but an economic imperative if Europe is to remain competitive in the global market place.

Manfred VOLLMER

Integration of general and vocational education — An international perspective

Education is an enterprise with a distant time perspective. The young people we have in school today are going to have their most productive years decades from now, well into the 21st century in a society and an economy that in important respects will look rather different. Thus in reflecting on vocational education serving those who are going to work in the next century, it would be in order to adopt a futuristic perspective.

In the late 1960s, futurological investigations became fashionable among planners and policy makers. They began to realize that plans drawn up and decisions taken today have fundamental implications for the social system of tomorrow, implications that, due to the rapidity of change in modern society and the emergence of unforeseen circumstances, are worthy of consideration. Futurological studies are therefore regarded as instruments not in the first place to predict but to spell out probable alternative consequences of decisions and/or actions taken today. Thus, those who devote themselves to futurological exercises are trying to work out possible scenarios. In writing future scenarios for education one has to start with a set of assumptions about the societal conditions under which education in the future will most likely have to operate. Even with the strong qualification that such scenarios are not telling what will happen but what could happen, given the decisions we take today, the exercise of envisaging the future is, indeed, a very hazardous one.



Torsten Husén

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In spite of being 'right' about major conditions in the future, wrong assumptions about one or two of them can lead planners and policy-makers astray.

In my capacity as a social scientist I was in the years 1968-70 involved in a major futurological study supported by the Swedish National Board of Education (Husén, 1971). The time perspective for the study was the one that futurologists at that time tended to draw up, namely the year 2000.

More than a decade later Unesco invited me to write a paper on present trends and tendencies in education with a perspective on the future. The paper was part of a future-oriented project the agency was then conducting (Husén, 1981). Since this was a point in time almost halfway between the late 1960s and the turn of the century I could, in preparing the paper, not refrain from checking the conditions I had assumed in the late 1960s. In my paper I pointed out that there were with regard to educational planning, two highly relevant changes with impact on education which had not been foreseen in the previous study. In the first place, the dramatic downturn of the birthrate, although it had already started in the 1960s in the Western industrial countries, had been overlooked. As late as in 1964 Georg Picht had published his alarming book 'Die deutsche Bildungskatastrophe' and had pointed out that the big discrepancy in size between older and younger age groups in Germany would result in an extremely serious shortage of teachers. Even if all young people who took *Abitur* became teachers it would not suffice to cover the demand. Soon the birthrate went down to half of what it had been before. Secondly, the 'stagflation' in the wake of the oil crisis brought about a situation of austerity which in many countries had a strong impact on the financial situation of the school systems. In the 1960s unbroken economic growth was predicted.

Evidently both these new conditions had profound consequences for educational policy and planning. Education in the industrial countries tended to slip down on the political priority scale. The number of those with a stake in education diminished. By the early 1960s in some countries

The relationship between general and vocational education has changed considerably in industrial societies during the second part of the 20th century as a result of universalization of secondary education and changing conditions in working life. The structure of secondary education across countries shows three models:
(i) the traditional, binary,
(ii) the comprehensive, and
(iii) the dual.

In Western school systems there is a movement towards a convergence between the three models. The prevailing tendency is to extend the core or general curriculum through at least the lower secondary stage. Thus a broader basis of general education for vocational education is laid. Sweden is used as an illustration. The delayed differentiation between 'academically' and 'vocationally' oriented students has brought about a higher level of quality of vocational education and an increased parity of esteem between the two programmes. One could formulate it with the paradox that the best vocational education is the one with a solid basis of general education and integrated with it.

The impact of high technology on job opportunities is discussed. Rather few highly-qualified jobs requiring advanced formal schooling will be generated. Most new jobs in the near future will be created in the service sector. The dual aim of the educational system is to prepare citizens for a complex technological society as well as holders of occupations.

about 40% of the voters had children in school or at the universities. By the mid-1980s the proportion had decreased to about 20%.

The working life setting

The forces which will have an impact on the labour market today and tomorrow can be categorized under three main headings: (i) high technology, such as computerization, biotechnology and new communication systems; (ii) market competition, internationally and regionally within nations; and (iii) new forms of work organization, particularly participatory ones. All three have implications for the educational system, including vocational education and the training for specific occupations.

Will the new technology, which recently has invaded our daily life, have a decisive impact on the employment structure? The answer is, surprisingly enough, close to an unqualified no. Predictions made by means of sophisticated techniques tend to show that relatively few new job opportunities will be generated until the end of the century by high technology. For instance, the Bureau of Labor Statistics in the United States has estimated that advanced technology will generate only 6% of the new jobs, whereas 70% will be generated in the service sector, such as health care, retail business, and public administration.

Even though the new types of jobs generated in the high-tech sectors are going to increase employment considerably in a relative sense, they will absolutely constitute a small increase in employment opportunities in comparison with all the manifold service jobs in supermarkets, restaurants, hospitals, day-care centres, old-age institutions, etc.

What do the changes occurring in working life imply in terms of qualification requirements for the labour force? The machines have long ago taken over most of the physical labour. At the turn of the century at least one-third of the work force consisted of pure manual labour. Now it is down to only 5 to 6%.

In the 1950s a wave of new technology introduced under the label 'automation' led to fears about mass unemployment. But the expanding economy, supporting an expanding public service sector, succeeded in absorbing those who lost their jobs due to the rationalization of production in the manufacturing industry.

The outcome of the new high technology wave which is in the process of affecting the industrial societies has, as we now see, been high unemployment among those with poor formal and vocational schooling. This applies in particular to countries which do not have a policy of full employment by means of public works and labour-market training and retraining.

Will 'over-education' occur as a result of the enormous expansion of the formal system of schooling? I do not think so. Citizens in a complex society with participatory democracy need to be equipped with a broad and solidly based repertoire of competence, skills and knowledge, in order to master their own destiny. Advanced formal education along with special vocational qualifications is the best insurance a person in our society can have against unemployment. Il will also serve as a good basis for further general education and special vocational training. More about this later.

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Implications of high technology for the system of education

Attempts to predict what will happen in the educational system as a result of ongoing technological changes depend very much on how the third force pointed out above, the work organization, will develop in the future. The classical industrial model of this organization has been a hierarchical one, where the worker performs a limited set of work operations under strict control and with little scope for his or her own initiative. We have begun to realize that this model does not work in present-day society with an increasingly well educated work force. Experiences gained, for instance in car manufacturing at the Volvo company in Sweden, have shown that workers' participation in a flexible work process can be a decisive factor in enhancing production and efficiency.

If a development along participatory lines takes place in the future, changes in curricula designed to provide future-oriented vocational education are called for. The traditional objective of providing skills and knowledge of a rather limited and specific nature would have to yield to competences which cover a broader range of situations — both within and outside the workplace. The central capacity that an individual in modern society needs to possess is the ability to learn and re-learn. The ability to acquire knowledge on one's own is essential in a society where the majority of holders of occupations are forced to take further courses in order to keep up and enhance their qualifications. In fact, most workers today will face a situation where they have to change their occupation at least once during their career.

In the service and information society the ability to read and write, on the whole the ability to communicate with one's fellow human beings, is of crucial importance in order to get along as a citizen in general and as a holder of an occupation in particular. It is therefore distressing that many young people nowadays leave school after nine or 10 years with poor communication skills which make them unemployable on a labour market where

such skills have become increasingly essential.

In addition, everybody in the present and the future society needs to become 'literate' in science. I am here referring not only to certain basic knowledge in physics, chemistry, biology, and the earth sciences. What has become increasingly important in an industrial world beset with ecological problems is the ability to use this knowledge as a citizen in judging the impact of science and technology on our daily life now and in the future. We have recently begun to talk about 'new science' as a school subject, relevant in a society where technology is putting the environment in jeopardy and often leads to adverse social consequences.

It is, indeed, essential in a complex society and an equally demanding working life that school education contributes to foster critical thinking and trains in the ability to tackle problems both cooperatively and independently. Such competences are of crucial importance if the production processes require more of workers' participation and initiative to find solutions to upcoming problems.

The school in highly industrial societies is often, when it comes to train young people to handle human relations, not least those at the workplace, faced with a contradiction between rhetoric and reality. I have dealt with this and other contradictions in my book *The school in question* (Husén, 1979). The curricular rhetoric talks about education for cooperation, loyalty and responsibility *vis-à-vis* other people, not least those at the workplace. But the reality is that modern, industrial society has become increasingly competitive and meritocratic. Social status is to a large extent determined by school attainments. It is the individual achievement that counts. Formal education has increasingly become the first criterion of selection among job seekers. Those who fail in school are at best assigned to the least attractive jobs and at worst become unemployed (Coleman and Husén, 1985).

A Unesco experience

Many years ago, in the late 1950s, Unesco invited a group of education experts to a committee charged with the task of preparing more or less universal curricular guidelines for secondary education. I happened to serve as chairman at a session in Paris when the relationship between general and vocational education was the major item on our agenda. We spent two full days trying to arrive at a consensus about what should be meant by 'general' education. Our French colleague with experience as *Inspecteur génerale de l'instruction publique* advanced the view that general education was the goal of the *culture génerale* that was embodied in the curriculum of the Franch *lycée*. The Soviet colleague, one of the Vice-Presidents of the Academy of Pedagogical Sciences, thought that Soviet polytechnical education was in essence general education. Our American colleague, superintendent of a big city school system, defined general education as the competences all citizens needed in order to get along in life, including driver education!

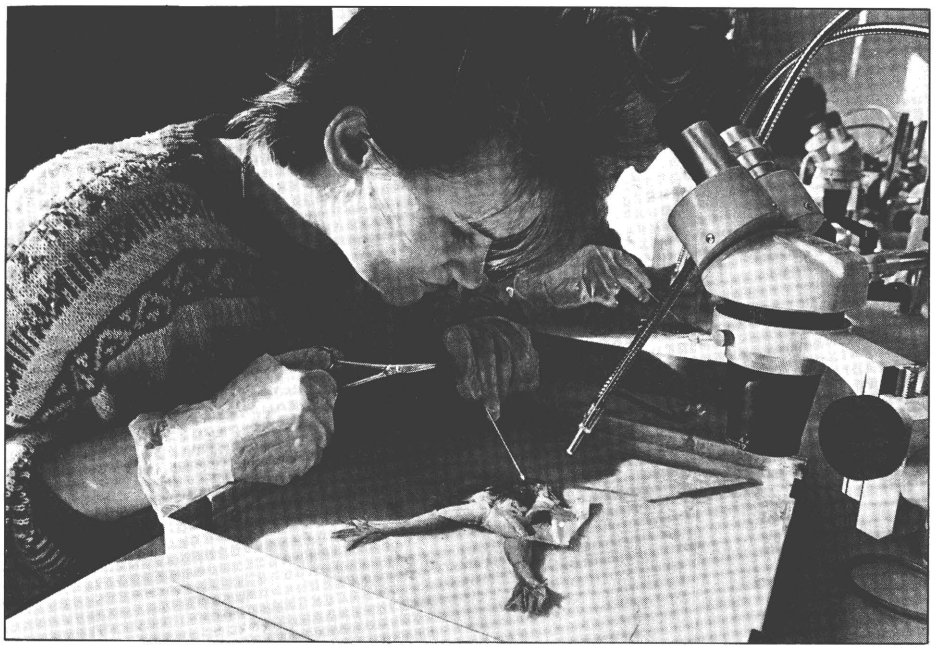
Laurie Sparham/NETWORK

It was indeed not easy to bring these different conceptions to a common denominator. The main reason for our difficulties was, of course, that even if there are certain general philosophical considerations and principles, which pervade different cultures and national boundaries, the concrete and operational manifestation of these considerations vary from one nation or culture to another. What the school needs to equip a young person growing up in a highly industrial and technological society differs quite a lot from the subsistence competence to which the school contributes in a developing society. Length, structure, and content of schooling by necessity vary with social and economic conditions.

The issue of general versus vocational education has an epistemological dimension with close bearings on the 'utility' of educational research, a problem that I have recently dealt with in an article for the Unesco journal *Prospects* (Husén, in press). The crucial problem I point out is that research cannot straightforwardly 'tell' the classroom practitioner what to do in a particular situation. There exists no clear-cut linear relationship of applicability between the generalizations offered by psychology, sociology, or the other social sciences and the actual school situation with a class and a child here and now. At best such research can offer a perspective and a framework for the use of common sense and experience derived from previous work and practice in the classroom. My Stanford colleague Elliot Eisner talks about 'connaisseurship' as the essence of teacher competence. It consists of the competence that must lie behind the understanding of the particular classroom situation and the particular child. This also applies to vocational education: the 'practical' has to fill abstract and theoretical with sensible content.

A comparative perspective

In looking at the secondary, particularly upper-secondary, school provisions in terms of structure and curricula in a cross-national, comparative perspective, we can identify three models.



Peter Hendriks/ULLSTEIN

■ The *bi-partite,* traditional European model where academic and vocational schools coexist as parallels. Their enrolments differ considerably with regard to student social background. The two types of schools show a high disparity of esteem and a low degree of mobility between each other.

■ The *comprehensive* model with highly diversified curricular provisions and with all the programmes under the same roof. The American comprehensive high school is the classical model. Recently, the Swedish 'gymnasium school' has become another example.

■ The *dual* model which is the prevailing one in the Federal Republic of Germany with a university-preparing, academic Gymnasium for the elite and the apprenticeship system for the remainder with part-time formal instruction and practice in enterprises.

Interestingly we can over the last couple of decades observe an increasing convergence between the three models, at least in the industrialized countries. In the United States of America, not least initiated by the National Commission for Excellence at the Federal level and subsequently by a lot of state and local commissions, there has been strong pressure for strengthening the academic curriculum. In the East European countries there has been a growing realization that students pursuing vocational programmes ought to be provided with an upgraded general education. In Sweden it has been found that those on the vocational tracks need to get a better and extended instruction in their mother tongue.

There is also a tendency across models and countries to break up the traditional institutionalization in secondary formal school locations and increasingly to move to new settings provided by either industry and business or by community institutions, such as youth service centres and youth cooperatives.

The Swedish experience

The changing conception over the last few decades of the role of vocational education in the system of public schooling can be illustrated by the Swedish school reforms. I am not citing Sweden as an example for other countries but simply as an illustration of a reform development that has taken place under great political stability and — by and large — under political consensus. It also illustrates the process of convergence mentioned above.

The first phase of the reform, taking place from the mid-1940s up to the Education Act establishing a basic nine-year school in 1962, aimed at abolishing the 'parallel system' where a social and intellectual elite could transfer to the academic secondary school after four years of elementary school, whereas the remainder stayed on until compulsory attendance expired after six or seven years. All school types covering the first nine years of schooling were integrated into a common, nine year, 'basic' school. The main issue was to what extent there should be a 'differentiation' of programmes during the upper stage, i.e. grades seven to nine. The pilot programme of comprehensive education during the 1950s had three tracks, one academic (with two foreign languages), one vocational and one 'general', a system similar to the one of the British Education Act of 1944. During the ninth school year, the 'theoretically oriented' took a 'pre-gymnasium' programme and the 'practically oriented' had some pre-vocational training. They were taught in separate classes.

In the years preceding the 1962 Act there had been a heated debate on what was referred to as 'differentiation' both organizationally and pedagogically (Husén, 1962). In a book published in 1961 under the title *The school in a changing society* I took the standpoint that one should try to postpone organizational differentiation as far up in the system as possible and try to keep all students in a common core programme. This would provide the competences needed for all citizens in a democratic and technologically changing society and provide them with a common frame of reference of knowledge and basic values. The longer the differentiation between the 'theoretical' and 'practical' was delayed, the less would be the influence of social background on educational opportunity and career.

The idea at the beginning of the reform period of introducing at an early age elements of 'pure' vocational training derived from the concept of a static society. The specific vocational competences acquired today were seen as equally useful tomorrow. But in a rapidly changing job structure, it is hard to predict what qualifications will be useful even a few years hence. My point in advising the Royal Commission of 1957 charged with the task of making recommendations about the structure of the comprehensive school was that, in order to play it safe, one ought to prepare the young people for a society and a working life in flux. Such a preparation should consist of a solid basis of skills and basic concepts in science and technology with applicability to a broad spectrum of situations and tasks, most of which are unforeseen today.

The consequence of such a conception of basic education ought to be a common, general curriculum consisting of a core of communication skills, scientific literacy and a frame of reference of historical and civic orientation.

The 1962 Act which made provisions for the new nine-year basic school implied three streams at the upper section, where from grade seven certain elective subjects could be taken which led up to three

separate sections in grade nine, from which transfer could take place to academic or vocational schools at the upper secondary stage (grades 10 to 12). According to a prediction based on the pilot programme roughly one-third of the students in grade seven would opt for the academic track. Very soon it turned out to be about two-thirds of the students. Thus, the majority did not feel attracted by the vocational programme. In less than 10 years, when the Minister for Education signed the objectives and guidelines for the next national curriculum in the basic school, there was a core curriculum for all students up to grade nine. The electives did not earmark the students for any particular subsequent programme. A fully integrated basic school without pre-vocational instruction had emerged.

In the late 1960s the next stage, grades ten to twelve, which in Swedish terminology were referred to as the 'gymnasium school', was completely restructured with the aim of catering to the great majority. It changed from being a university-preparing elite school serving less than 10 % of the age group to a continuation school for some 90 % of young people. If offered more than 20 programmes, most of them vocationally oriented two-year courses whereas the academic programmes covered three years. About one-third of those who continued upper secondary education entered the three-year academic programmes. The interesting experience is that it has been possible to attract highly able students with good marks in grade nine to the vocational programmes. One motivating factor to enter such programmes has been that all students with a two-year programme and with a certain minimum mark in mother tongue and English possess general entrance qualifications for higher education. This has, of course, contributed to enhance the prestige and attractiveness of the vocational programmes.

The experiences gained during the almost two decades which have elapsed since the upper secondary school reform have shown two weaknesses. One drawback has been the time available. 'General' subjects, particularly the mother tongue, had to yield to instruction in the directly vocationally useful parts of the curriculum. Teachers and the enterprises which employed the young people complained about deficient basic skills, particularly in writing and in reading comprehension. Thus, recently the Swedish Riksdag passed a bill according to which a three-year vocational programme is introduced in a large number of gymnasium schools on a pilot basis. The extension of the vocational programme is, of course, another factor that contributes to the parity of esteem with the academic programmes.

Needless to say, mass secondary education, where vocational programmes qualify for university entrance, is beset with problems which, however, may have to be taken as part of the deal if one wants to achieve the parity mentioned above.

Concluding observations

Given the changes in working life and in society at large: is formal schooling and vocational training going to be only reactive, i.e. simply adapt to new requirements of society? Or to what extent can the school become 'proactive', i.e. contribute to making young people ready to meet the future and thereby serve as an active agent for change in the context of a changing society? These questions are, indeed, fundamental for educators of today. Reformers have for a long time believed that the educational system has an important role to play in shaping a new and better society, an optimism which prevailed among American progressive educators after the First World War.

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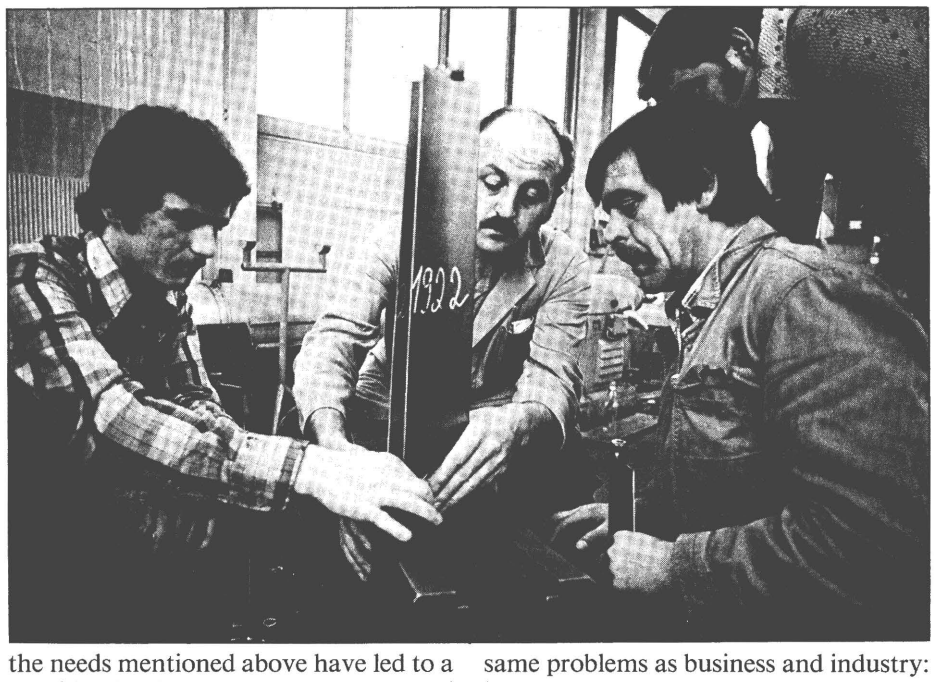
I have formulated the issue of general versus vocational education in the following paradoxical way: the best vocational education in today's rapidly changing society is a solid general education both in terms of breadth and quality. This by no means implies a down-grading of vocational education *per se*. On the contrary, it implies an upgrading of its quality, scope and, not least, prestige. Unitl recently the prevailing philosophical view in the Western world has been that there is a — rather limited — pool of academically talented or 'theoretically oriented' young people who as early as possible during their school career ought to be channelled into the gymnasium (grammar school, *lycée)* type of school which should take care of their preparation for university and the professions. The 'vocationally oriented' should be encouraged to enter 'practical' programmes as early as possible in their school career in order to prepare themselves for the jobs they are heading for. They need only a modest repertoire of 'theoretical' skills and knowledge.

We have begun to enter what properly could be labelled the learning society (Husén, 1974) where formal schooling acquired at the early stages of life is just the beginning and where the rest of life for most citizens will be one long continuation school. The term 'recurrent education' was coined by the then Swedish Minister for Education, Olaf Palme, when he gave a keynote address at the meeting in Paris 1969 of the OECD Ministers for Education. Holders of all kinds of occupations should have the opportunity to take leave of absence from their jobs now and then in order to take courses which would enhance their vocational competence. They could, among other things, be participants in huge adult education programmes, either public (as is the case with the adult gymnasia in Sweden) or private (under the auspices of personnel training programmes run by the enterprises themselves). The training provided in a system of recurrent education would aim in the first place at improving vocational competence.

The future of education and training in an age of technological and organizational change — Towards new structures and new teaching careers

In most European Community countries, public-sector education and initial training is subject to conflicting pressures, creating problems which are very difficult to solve. Faced, on the one hand, with escalating costs and, on the other, with a massive demand for the services they provide, the institutions responsible for education and training — or at least a substantial proportion of these institutions — no longer succeed in meeting what society expects of them i.e. to provide young people with the skills they need in order to find a job and perform an occupational activity in line with their abilities, on the one hand, and satisfying economic and social need, on the other.

This pressure has been exerted for several years now in the form of a growing demand for education from parents (an increase unrelated to the birth rate), higher standards of training sought by employers and the need to minimize wastage within the educational system, i.e. academic failure. However this pressure has undoubtedly been accentuated by slower economic growth and increasing budgetary deficits, whereas the needs mentioned above have led to a considerable increase in the number of students and teachers in education and training establishments, as manifested by the ever-larger budgets that have to earmarked for these fields.[1]



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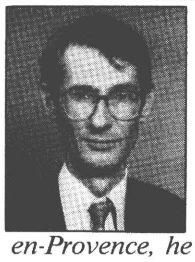
Education and training establishments and the teachers who work in such establishments are confronted with the same problems as business and industry: in response to the changing pattern of the demands with which they are faced they have tended to organize themselves according to the prevailing models designed to satisfy mass production and to use the technologies available on the market.

Today, however, these establishments and their teaching staff can no longer



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The education and training system and the professional activities associated with that system cannot avoid the changes generated by the combined impact of technological development in education and training and the social demands made on the system in the context of budgetary constraint.

In France, the country which serves as an example, the structural characteristics of this collective function and the professions involved in that system are grounds for predicting a profound rethinking that will revolutionize teachers' working conditions and professional identity, as well as the profiles for their recruitment and training.

evade the challenges to their own work and skills, faced with the changes currently taking place on two fronts — in technology and the administration. They realize that they are affected by current technological developments determining the nature of the tools their students will have to handle in their work as well as the tools they themselves use for both teaching and the management od education. In this article we shall look at the general pattern of change and try to map out its potential effects on the French educational system.

Let us first of all consider the main criticism levelled against this system and the reaction of teachers. Since all establishments and systems are the products of society, moulded by the course of history, and must be identified by anyone concerned with the direction in which they are evolving, we shall then examine the characteristic features of the French educational system: its infrastructure, the agencies involved and its mode of operation — all of which are closely interdependent — as well as the major changes now taking place with respect to the demands on the system. Finally, by analogy and extrapolation, with what is happening in the sectors producing goods and services we shall describe the general directions along which the educational system is most likely to move.

It is hereby a question of general directions, and not of absolute certainties. The effective changes shall depend on how the people involved cope with the tension points — indeed the breaking points — and rebuild effective structures for the future.

In any case, the transformations that do take place are likely to be very profound. They will not only change the educational infrastructure and the basic professionalism of teachers, but will also break down and then reconstruct their identity. As a result, these transformations shall only be able to be successfully engineered by increasing mastery of the process of change by those at the top who administer the education system.

The main criticisms of public-sector education and training and teachers' reactions

The result achieved by educational systems, despite the substantial additional resources devoted to education and training, do not seem to match the efforts devoted to them; at the same time teachers are increasingly dissatisfied with their working conditions.

Inadequate sufficiency

More specifically, the criticism made of the French public-sector education and training system, just as those of most European Community countries, remains the same: the continuing high rate of academic failure in school education, and the difficulties encountered by young people entering the labour market in finding jobs quickly that correspond at least in minimal terms in specialist skill and status to the education and training they have received. Employers, moreover, complain that it is hard to find the skills they feel they need. They accuse initial training administrators and teachers of not being able to do their jobs, or at least of being too conservative or lacking in dynamism to make progress and introduce change.

This criticism may assume a form more closely oriented towards the distinctions made between public and private-sector institutions, the latter being presented as less bureaucratic and more geared towards 'offering a service to the client', in other words as making an effort to provide those who come to them with an educational service of better quality in that it is more likely to lead to employment. By being open to change and prepared to adapt the training they provide in response to the needs, it is argued, private-sector training agencies are more aware of both educational and technological innovation because they are more market-oriented.

Such accusations are all the more likely to have some force in that we are likely to

see the development of major technological innovations, a radical evolution in the standards of education and training demanded by employers and also marked changes in the school population.

Profound dissatisfaction

Teachers respond to such criticisms by pointing, with varying degrees of vehemence, to: the shortage of teaching staff, resulting in excessively large classes; a deterioration in their financial and social status; the cumbersome procedures by which they are bogged down; and the multitude of constraints they encounter at every level and at every point as soon as they try to break out of the routine mould created for them by the directives they have been imparted.[2]

Their demands are autonomy, freedom to choose how they teach, and more resources so that they can at last do their job in a way closer to their aspirations and even their professional ethics. They complain that administrators at every level are out of touch with reality and unaware of all the many ways in which the procedures fail to work in practice. As evidence of the deterioration of teachers' status, they cite the lack of interest in teaching as a career among young people. For example, despite high unemployment, there are fewer applicants for teaching posts and there is a high rate of resignation among those who have entered the teaching profession. Finally, they demand better teacher training, both initial and in-service, as well as a substantial increase in their salaries and status.

If those demands were to be met, they declare, they would be prepared to evolve in response to clearly identified needs along carefully planned lines. They point to the many teaching experiments being conducted within individual establishments on the content of subjects, internal collective organization and collective organization involving partners outside the establishment. They feel that the criticism often levelled against them of 'corporative immobilism' are unjustified: their claims are a 'buttress' against the danger of a 'sell-out' of initial training to purely commercial interests or — equally serious — the deliberate resolve to set up 'multi-tier' initial training which would undermine one of the basic tenets of democracy.

The main features of the French educational system: establishments, persons involved and how they work

The main features of the organization of French business and industry, as outlined elsewhere, are mirrored even more clearly by the organization of the French education system and the role it plays in the economy, except that the hierarchy is not as marked in schools. Both systems are characterized by the specialization according to function, differentiation according to status compartmentalization and a high degree of rigidity, as well as by the many functional breakdowns that ensue.[3]

Close supervision of schools by central agencies

In France, schools are traditionally differentiated according to the level of education they provide and by the main types of education. A distinction is made, for instance, between: ***écoles,*** primary schools attended by children up to the age of 10; ***collèges,*** schools for the first cycle of secondary education; and ***lycées,*** for the second cycle of secondary education leading to the baccalaureate. Within secondary education there is a further breakdown between ***lycées d'enseignements généraux*** (grammar schools), ***lycées techniques*** (technical schools) and ***lycées d'enseignements professionnels*** (vocational schools).

All these educational establishments — and this is perhaps the essential difference from other Community countries — are closely supervised by central departments of the Ministry of Education. This supervision is exercised

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through rectorats, or rectorates, in the 16 geographical areas in to which France is divided for the purpose of educational administration, known as académies. All the many operational departments in the ministry are represented in the rectorates, which coordinate their efforts and report back to the ministry on the results of their work in the fields of management, teaching and statistics.

The reference models for French schools

Considerable constraints are placed on French schools by the models that have been taken as a reference for their organization.

The *lycée d'enseignement général* is based on the model established by Jesuit schools in the 19th century, which imparted a high standard of very academic education to a small, selective group of pupils. Their teaching methods were based on demanding hard work and a will to succeed.[4]

The teacher was the embodiment of knowledge, which he delivered *ex-cathedra;* the pupils demonstrated their understanding of what they had been taught by reciting the lesson and by doing their homework. If they failed to do so they were punished, to show them that they had done wrong in not coming up to expected the standard. This combined transmission of specialist knowledge and educational norms gave each individual an idea of his own worth and the position he was entitled to expect or claim in society.

In this model, transposed to the present-day situation in the classroom, the teacher has complete authority over his pupils, both educationally and in the goals he sets. In practice he is answerable only to his 'inspector', who visits the classroom intermittently and assesses him.

The *lycée professionnel,* or vocational school, on the other hand, is derived from the model of apprenticeship in the craft trades, although a clear distinction is made between theoretical teaching and practical instruction in the workshop to signify that greater importance is attached to theory than to practice.

Narrow functional specializations

There are divisions of labour both within school establishments, among staff with highly diversified and specialized responsibilities and status, and outside the school, because of the specialist roles acquired or claimed by each group. Within the educational system, for example, clear-cut distinctions have been made between academic education that imparts culture and vocational education that is designed to teach a trade. In the same way, a distinction is made between the schools that teach and enterprises that produce, but distinctions are also made between the roles assigned to education, which is expected to educate, and television, which is expected to inform and entertain.

Similarly, there is a division of labour between educational establishments whose role it is to teach and educational research establishments which conduct research on the best ways of teaching!

Finally, within schools themselves there are sharp dividing lines between teaching, documentation and guidance jobs, not to mention the obviously important job of administration.

The people who work in education: hierarchy and differentiation

The first and probably the most marked form of differentiation is in status within the teaching body, even though all teachers have a single role — to teach in the classroom. Leaving aside the distinctions between *enseignants contractuels* and *enseignants fonctionnaires*, the former being in essence auxiliary teachers while the latter are permanent teachers with civil servant status there are clear-cut distinctions within the latter group of *fonctionnaires*. There are the *instituteurs* who teach in *écoles* (primary schools), the *professeurs d'enseignements généraux* (PEGC) who teach in *collèges* (lower secondary schools) and the teachers who are entitled to teach in all secondary education establishments.

In the third group, a further status distinction is made between teachers who are *certifiés* and those who are *agrégés*, the source of the distinction being the type of competitive examination they have taken.[5] Differences in their status are manifested by their salaries, the number of hours they have to teach and their right to a choice of class within the school after they have reached a certain level of seniority. Quite apart from differentiations of a purely financial nature therefore, there are status symbols which firmly establish the distinctions between them.[6] However there are also differences in the number of subjects they have to teach. In French education, the higher the teacher's status, the more he or she specializes in a given field, whereas teachers with the lowest status teach the broadest range of subjects. *Instituteurs* working in primary education teach all subjects, PEGCs gnerally teach two subjects and teachers who are *certifiés* and *agrégés* teach only one subject.

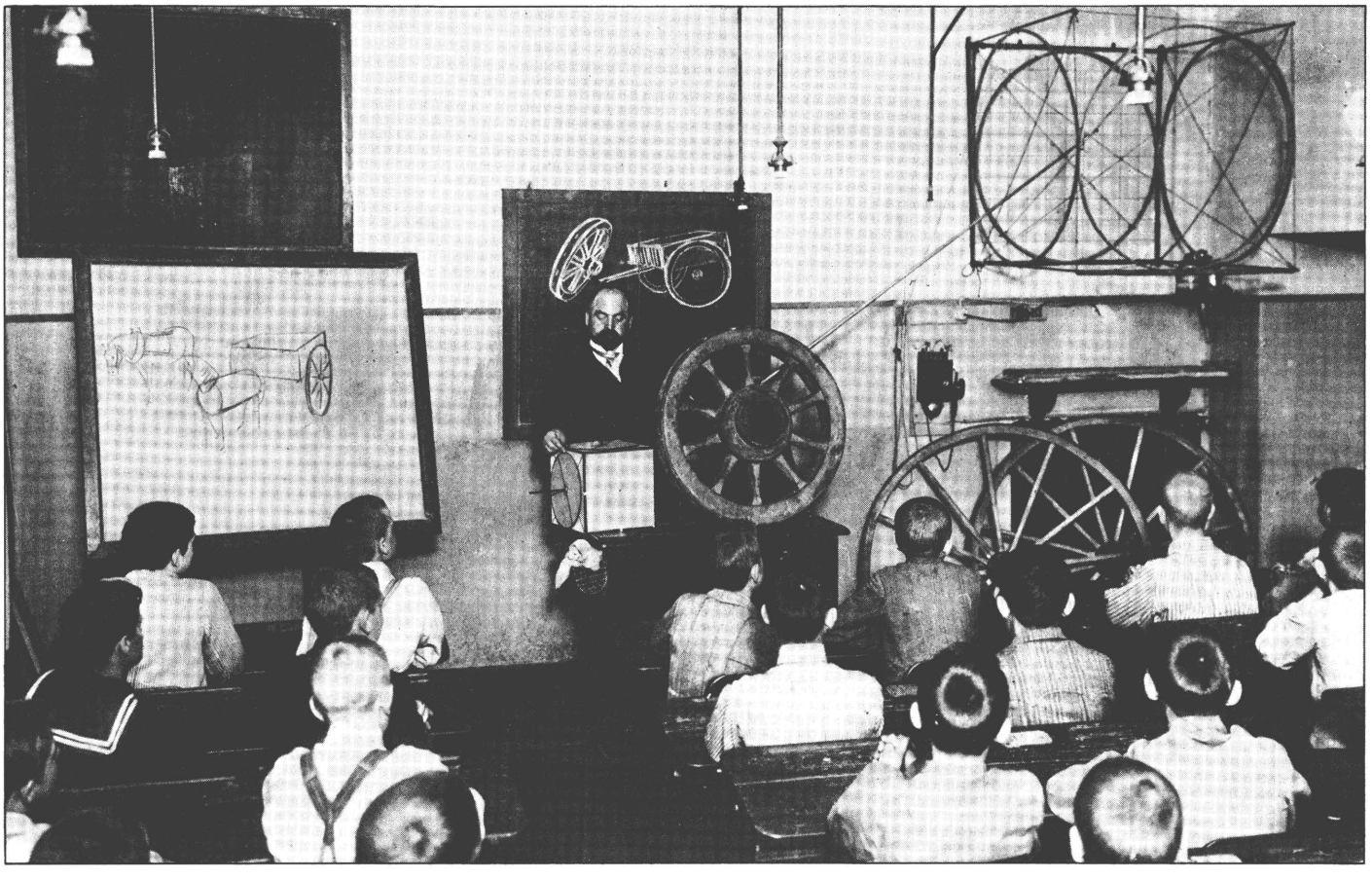
This hierarchical attitude is also to be found in the subjects taught, some of which are held in higher regard than others. In academic education, the subjects that come at the top of the scale are, of course, mathematics and the classics, i.e. Greek and Latin. Then come subjects like French and physics, which form the general basis of education. These are followed by modern languages, natural science, history and geography and economic and social science. At the bottom of the scale come creative subjects such as art, music and physical education; the coefficient applied to examination results in these subjects is low, and pupils generally try to obtain permission to drop them. We shall not discuss the differences in technical and vocational education, but the same subject stratification is to be found at this level; more or less subtle distinctions are made between subjects, whereby the status of these subjects is in itself lower than that of subjects in academic education.

To complete the picture, reference should also be made to the other professions working in educational establishments. These are the persons engaged in the jobs of guidance, documentation, supervision and management, grouped in units known as *services;* as such, they feel they are treated as slaves to the teaching staff.[7]

Rigid operation based on segmentation and compartmentalization

In view of these factors, it is hardly surprising that the French education and training system should be so rigid and compartmentalized in its operation.

The French education system is rather like a multistage 'distillation column', in which pupils regarded as the least gifted are gradually filtered out and relegated. As they move up through their school education, children go their separate ways: towards the 'aristocratic' streams of education, those in which academic and scientific subjects are studied; towards the rather less 'aristocratic' streams of 'long-cycle' general education (literary and social subjects) or towards technological and vocational education.



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In each year's generation of youngsters this process leaves in its wake a group of 'rejects' — academic failures who leave school when they reach the minimum school-leaving age and come onto the labour market without any form of training where they gravitate towards the 'youth employment schemes'. It has been estimated that these youngsters currently account for a steady 10% of each year's generation.

This selection and grading process begins even before the age of compulsory schooling, in pre-school education. It becomes more marked in primary education: scholastic prowess in secondary education is directly correlated to achievement in primary education.

All those concerned with education, both parents and teachers, seem to accept this state of affairs. Despite the criticism levelled at the system, it has remained stable since it fits in well with the way that French society has evolved.

As the classes are administered, it is very difficult for a youngster to aggregate an entire corpus of knowledge: there is no vertical monitoring of a pupil's school career, since each year is a separate entity in teaching terms and each teacher is the sovereign authority in his or her own classroom, a concept that has prevailed over the idea of a 'teaching team'. Subjects are also perceived as disciplines in their own right and are themselves compartmentalized.

The strongest form of dualism, however, is the division between theoretical teaching and practical work on vocational subjects in technological and vocational education, to a point at which the French system could be said to be dualistic or splintered. This is potentially harmful, for theory should be built up step by step, accompanied by progress in practical work. This compartmentalization is reinforced by the lines of demarcation between education and the workplace.

The changing demands on education and training, accentuating its internal contradictions

The demands traditionally made on education and training basically reflect three needs:

- the need for democracy (giving the various groups making up the population the maximum opportunity of access to a corpus of knowledge which will in turn pave the way, under optimal conditions, for citizen's rights and obligations, first and foremost the right to paid employment);
- the need to produce an élite (the political and economic executives needed for the country to be properly administered);
- the need to produce the skills that will meet the various needs of the economy.

However these needs are undergoing a tranformation on account of economic and social change in society, reflecting in particular the growing complexity of social and working life, posing greater challenges than in the recent past (the post-war period of prosperity).

Difficulties linked to the demands of democracy

As pointed out, the requirement of democracy assumes in principle that there can be a simple solution to the elementary problems of access to basic knowledge for all, enabling everyone to find his or her place in society and at work: literacy and numeracy. In practice, this requirement comes up against the obstacles generated by the changing patterns of a heterogeneous society, especially the growing proportion of children from families who are vulnerable and at risk: precarious, single-parent families, families living in poor housing, families with low incomes because the wage-earners have lost their jobs, families of foreign origin who have

failed to integrate satisfactorily into their 'host' country.

It is well known that in practice the rate of scholastic failure and the early marginalization that ensues from such failure are correlated with the accumulation of disadvantages of this type from which children suffer.

The contradictory requirement of producing an élite

The parallel requirement — to produce an élite that is both greater in number and quality — reinforces the type of education which, unlike the education for democracy described, is directed not at the mass but at one segment: the best. The problem of the production of élites is all the harder to solve in that it is such an urgent need, linked as it is with the development of science and technology, the widening of decision-making circles and the internationalization of the economy — quite apart from politics — and the ever-growing risks to communities that may arise from whatever decisions are in fact taken.

The need is also pressing because it entails choices as to the apportionment of those rare resources, be they financial or human. Since education to produce an élite calls for both a reinforcement and extension of knowledge, resources have to be concentrated on specific groups that have emerged from ever more stringent processes of scholastic and social selection. In other words, this objective is in contradiction to the other objectives, unless ways and means can be devised of combining a general improvement in standards of basic education with an expansion of the élite.

Foundations to be laid for vocational and technical education

The same demand for a reinforcement of knowledge tends to be formulated at every level of vocational and technical education. It is expressed by the demand for a broader vocational base, i.e. the extension and deeper interpenetration of academic and technical knowledge. In particular in the reform of vocational education, the changes need to be based on a rethinking of technical and vocational education.[8]

The main factors that may constitute the reasons for the major changes observed in the demands made by employers at the level of recruitment have been discussed elsewhere [9] so that these changes shall merely be recalled in broad outline at this point.

In general, the introduction of new technology is causing an evolution in the prevailing cognitive processes:

- complex, heterogenous information from a variety of sources has to be combined in the decision-making process, calling into question the increased factors of interdependence;
- work is on-line and interactive;
- work is on variables that have been rendered abstract by the intermediate technical systems interposed between the sources of information and its users;
- work takes place in an environment in which uncertainty prevails, i.e. in which nothing is predetermined and people cannot avoid making choices;
- at the same time there are situations in which there are so many possible choices that the references required for a decision are very hard to determine, especially in the light of the contradictory constraints imposed on this decision.

The term 'new technologies' is basically to be understood in the conventional sense of 'new information processing technologies', i.e. computerization and general digital processing of information, the media for its magnetic and optical storage and the systems to read these media, as well as information transmission systems (via cable, optical means or satellite).

Those cognitive processes lending themselves to formalization and expression in algorithmic form are also likely to be gradually computerized, thus making human intervention even more an exception than before. As processes are automated, human beings will increasingly be confronted with the dysfunctions in complex technical systems.

Essentially, humans will intervene only when the system breaks down, and will

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then have to mobilize information and expertise in situations of an urgency rarely if ever encountered before. Even if there is a rapid development in simulation tools or expert systems as a result of research on artificial intelligence, these systems will call for very delicate decisions entailing a high degree of responsibility in terms of both finance and safety.

Technology is not the only source of change in human work. The evolution in the reference models adopted by employers in deciding on the organization they establish plays a no less important role, since the factors tend to be mutually reinforcing creating productions units with their own social identities, irrespective of the features they have in common.[10]

With this in mind, it may be considered that some of the most important aspects of the question are the current forms of organization and management in which there is a growing tendency to grant priority to economic, rather than technical goals. It must also be considered that they tend to give a greater degree of autonomy in immediate action — subject to the aforementioned economic constraints — linked to a reinforced integration into strategic orientations, also considerably more centralized.

Such perspectives presuppose that individuals shall be capable of fitting into globally complex institutional and decision-making systems.

Probable major trends in the future of education and training structures and in the teaching profession

Without wishing to enter into controversy and without endeavouring to justify the claims made by the persons involved, it can legitimately be argued that — faced with the demands on teachers in terms of results and the groups to be educated — there will be profound changes in the teaching profession and the collective function of teaching, along the lines of those observed in other economic and professional activities which have undergone varying degrees of growth and have been protected by the restraint of competition. Schools and teachers are unlikely to evade the growing economic pressures placed on them by the necessity of budgetary choices and by competition from the private sector.

In the long term, it shall probably be a question of a complete internal and external reorganization of collective conditions linked to the use of new technologies. As with other services, these changes shall not only make possible substantial increases in productivity, but shall also transform the nature of the services rendered. From the point of view of the individual, the interested circles — all the professional groups involved in the provision of education and training — shall be faced with transformations in the content and identity of their work. In other words, a major upheaval is to be expected in the collective function of training and education and, as a corollary, in the teaching profession. This upheaval shall probably have the greatest impact on French public sector education in the light of its traditional specialization and segmentation as described above.

In an attempt to pinpoint these trends, it would be interesting to apply to education and teaching the matrices developed for the economic and social analysis of current changes in the production system of both the manufacturing and the service industries. As in the latter case, the challenge is to achieve adaptability and flexibility and to make the services rendered more effective. The adoption of new technologies is only the first step: what is needed are far more concentrated structures within which there can be much greater specialization.

Emerging technologies and the prospects they open up

The traditional educational and training technologies are the classroom, blackboard, text books and exercise books, the teacher and the lesson he or she gives, and practical work. Information technology opens up new prospects which have so far only begun to be explored. These prospects are even greater in the field of continuing training, in which the leading industrial and service sector groups are pumping a massive volume of investment into attempts to cope with all the problems of retraining and continuous skill upgrading for staff working in the fields of information technology, electronics, banking and insurance. The experience they have acquired with groups of shop-floor and office workers serves as a complement to the experience of (mainly American) universities in the field of higher and technological education.

The first phase, and the one most commonly embarked upon, has been the introduction of video methods into the classroom. In France video is mainly used in documentary form to illustrate what has been taught by the teacher. The situation is very different in the United States: in France, video is hardly ever combined with its own manual to form a teaching unit in its own right. Admittedly, such a package requires the school to have its own video machines and above all it calls for a renewal of teaching methods and aids — and insufficient effort has been channelled into the research this entails.

The second phase is to introduce the computer into the school and, the next step, computer-assisted teaching (CAT). The information available tends to be contradictory. Once again the impression is conveyed that initial expectations were far too optimistic. Neither the computers nor the languages and software available are sufficiently powerful and flexible for the system to be truly interactive or to allow the variety of access required by users, with their different personalities. The most important contribution of CAT is probably the provision of this flexible access and guided steps through 'lessons', together with the individualization of progress.

The results achieved with CAT in the field of continuing training, both in general educational subjects and in the acquisition of job skills, demonstrate that great strides have been made. They also show that one reason for the setbacks encountered with this form of teaching is once again the myth that the machine can replace the human being. Unless they are strongly motivated, people left alone in front of a machine do not learn. There is still a need for someone to be physically present, whether that someone is a teacher/monitor or a tutor. The fact remains that substantial investment is still needed in this field.

These techniques are utilized observing the traditional unity of place, i.e. the classroom, although it is possible to dispense with unity of time. The same applies to video disks and teaching simulators. The launch of the video disk by Philips was a failure because it was too expensive and limited in performance. This in not the case with the interactive compact disk jointly developed by Philips and Sony (CD-I) which combines sound, picture and text as the user wishes — in other words, it is a multimedia package. CD-ROM is also a considerable advance which may well be one of the key technologies of the new style of education and training. The same will probably

apply to simulators in the field of vocational education and practical work.

Telematics shall constitute a further step towards the dissolution of the classroom by introducing interactive distance learning. Leaving aside the telephone and Minitel, whose uses are over-restricted, and teleconferencing which is over-expensive, the technology with the greatest potential ils local or wide area networking. According to the educational aids in question, long-distance transmission may be established by television satellites, RNIS remote networks, ordinary switched networks combined with host centres or local CD-ROMs. Local networks of the Ethernet type may also be used.

The prospects for diversification: far-reaching but subject to constraints

The combination of these techniques can break up the teacher/lesson/class module with its three unities — place, time and method, calling into question the survival of the craft method of educational production according to which the process of production of the service rendered — the transmission of knowledge — is invariably incorporated in the actual rendering of this service.

This therefore marks the beginning of a massive industrialization of education and training, manifested by investment in educational aids to be used on a wide scale in order to increase the productivity of the individual learning process, thus lowering the cost while improving effectiveness.

However, because of the need for a human presence to help the learners, there are limits on the extent to which productivity can be improved. Since education and training are not just the source of the acquisition of knowledge based on individual learning but also a process whereby people learn to be part of their society, it is hardly conceivable for education and training to be organized in such a way as to be tailor-made for each individual.

Current thinking is that the structure of education should be diversified, becoming partly individual and partly collective. This shall obviously entail the diversification of educational structures and roles. Now that the three unities are no longer a constraint, there is considerable scope for an imaginative rethinking of parallel ways of organizing education and vocational training in the context of which the traditional frontiers can be completely abolished. The school can allow the outside world, with all its variety and richness, to enter the classroom. The teacher and dispenser of knowledge can be anywhere at any time, using the most sophisticated forms of teaching.

With all these new prospects, the teacher's job can be structured in new ways, with new divisions of labour and new forms of specialization. There can also be a complete overhaul of the place, time and manner of education and training, involving new types of practitioner.

It would, however, be illusory to believe that such developments will be easy. They will demand planners capable of creating new structures while making appropriate allowance for the constraints:

- inherent to each target group;
- imposed by the technologies deployed;
- linked with pre-existing structures and practitioners.

With reference to the third type of constraint, difficulties will inevitable arise in France on account of the dominant features of its educational system, as described in this article. For example, much of the pryramidal hierarchy and the job-based distinctions in status could be abolished, and the system reconstructed according to specialist skills (lesson planners, tutors/leaders, managers of educational media hosts, etc.). Alternatively, the system could be restructured according to the target groups in which practitioners specialize (pupils from disadvantaged social environments, etc.).

These developments could also be towards the generation of multiple skills as the job of teaching is broadened. One advantage of such versatility in the teaching of subjects is that it would decompartmentalize subjects and help teachers to adapt more readily to advances in the disciplines they teach.

A few practical questions as yet unsolved

The discussion up to this point may seem very abstract to some of our readers but, as an epilogue to the points we have made, they could be illustrated by raising several practical and as yet unsolved questions.

It is clear that existing movements inevitably lead to reconsideration of the problem of the links between the public and private sector, their respective roles and conditions for their cooperation. The problem arises, e.g. of how the roles, costs and results could be shared out amongst those involved in the process of educational engineering. This question immediately implies the delicate matter of intangible investment and its expression in terms of figures.

Schools, for their part, are faced with new problems of investment and budgeting as soon as they seek to equip themselves, e.g. with multifunctional terminals subscribing to cable networks. Will they have to seek private sponsors or charge for their high-cost services as a return for their 'increased educational efficiency'?

Whatever the answer, all these trends shall force the teacher to become a manager and probably a 'salesman', one who has to state precisely the services he claims to offer and present them to the public so as to attract people to use his services.

If this is so, how can the education/training system continue to operate with the salaries, social status and working conditions it currently offers? The job profiles of the staff it will need if it is to derive full benefit from technology under the economic conditions envisaged will be close to the job profiles generally sought by companies in the service sector. Professional and social distinctions between the teacher's job and other jobs will be reduced. This will inevitably lower the barriers on the labour market that have been created by those distinctions. How will the public sector be able to confront such a problem?

In the context of these general perspectives, teachers and administrators in training and educational establishments shall be confronted with a much more stringent economic and social assessment of their activities; they shall have to acquire a technical and conceptual mastery of their new teaching tools, relating them to the target groups they serve (levels of education, forms of intelligence, social groups, etc.); in their individual approach to these groups they shall have to respect a general framework of the equal rights of all citizens to education and training.

Since the changes are likely to be so extensive and since there are no pre-set models of reference to, there is the problem of whether teachers and administrators can design experiments in

their capacities, evaluate the experiments properly and accept evaluation of their work by others.

It is evident that this gradually leads us back to the question of how an educational system can be set up and assessed, not by rules and procedures that are deemed to guarantee equality, but by an evaluation of services rendered by comparison with the stated goals and the resources mobilized. In other words, the entire tradition of French administrative control is being called into question.

Footnotes

1 The French budget for public-sector education (not including higher education) was FF 84 000 million in 1988, 93% of which went to salaries and pensions (50 000 working teachers and 350 000 teachers in retirement).

2 Net salaries (excluding bonuses) paid to French teachers

	Start of career	End of career
Primary school teachers	FF 6 112	FF 9 872
Secondary school teachers	FF 6 172	FF 10 173
'Certified' teachers (see note 4)	FF 6 775	FF 13 049
Teachers with *agrégation*	FF 7 841	FF 16 325
Teachers with higher *agrégation*	—	FF 19 180
Source: French National Education Ministry		

3 See Marc Maurice, F. Eyraud, A. d'Iribarne, F. Rychener, *Les entreprises en mutation dans la crise,* CNRS-LEST, multigraph report, Aix-en-Provence, 1987, 450 pp.

4 As opposed to the 'preceptorship' model, under which a child's education and training is entrusted to a tutor assigned to him or her over a period of several years in a one-to-one relationship. The tutor system favoured in numerous schools in the English-speaking world is a version of this model.

5 'Certified' teachers have passed a 'certificate of aptitude for teaching in secondary education' (Capes).

6 The improtance of these distinctions is apparent even in union membership: while *agrégés* tend to join their own separate union, other teachers tend to join a union federation, the *Fédération de l'education nationale* (FEN) whose member unions represent specific bodies of teachers. SNI, for example, represente elementary school teachers, whereas SNES represents teachers in secondary education.

7 This distinction was brought to my notice by the head of such a service who, unhappy about the attitude of research departments to his operational department, pointed out that the word service is derived from the Latin *servius,* or slave. In France there is a marked distinction between *rendre service à* (do a service for) and *être au service de* (be in the service of). A. d'Iribarne, *Logique de l'honneur: gestion d'entreprise et traditionnelle,* Le Seuil, Paris, to be published in 1989.

8 This point has already been touched on in the same journal: A. d'Iribarne, *La nécessité d'une éducation professionnelle* in **Les nouvelles technologies,** Revue Formation Continue, No 11, June 1983.

9 Some of these developments have been briefly described in the same journal: A. d'Iribarne, *La nécessité d'une éducation professionelle* in L'**usine de l'avenir et le futur du travail,** Revue Formation Professionnelle, No 11/1987. The developments are described in full in A. d'Iribarne, *Transformation des métiers, efficacité économique et structures sociales: profession d'hier, d'aujourd'hui et de demain,* CNRS-LEST, mimeographed report, Aix-en-Provence, November 1988, 402 pp.

10 On this point see *Les entreprises en mutation, op. cit.*

General and vocational education in a risk-taking society[1]

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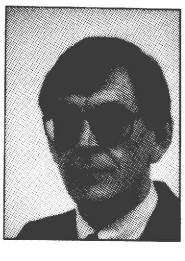

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The relationship between general and vocational education has long been a dominant and controversial issue in debates on educational change. Changes in the structure of production and the labour force and the labour market are prompting reinterpretations of this relationship and the debate which surrounds it. It is becoming increasingly clear, moreover, that the education of children and adults should also anticipate the consequences of modernization processes which create risky technologies. The changes in the labour force and especially the risks inherent in modernization lead the authors to suggest some implications for adult education.

The problem

There is no doubt that new individual and collective conditions of existence and opportunities for development have emerged in both employment and daily life in recent years. This phenomenon can largely be attributed to the large-scale introduction of the information technologies. Less conspicuous perhaps is another aspect of the current process of social modernization. It is becoming increasingly difficult to deny that technical and industrial development entails risks not only for specific social groups, but also as a result of their global nature, for each individual. A detailed appraisal of the consequences of the modernization process is not yet possible. It is nevertheless clear that requirements and obligations are emerging for initial and adult education which have still to be adequately translated into a national education policy (or alternatives to such a policy), let alone educational concepts.[2]

One of the central questions in this context is whether the solution to problems observed in adult education is to be sought in general education or whether the response is to offer vocational education. Although these are not, of course, mutually exclusive alternatives, since adult education provides both general and vocational education, the two strategies are nevertheless largely based on different premises and arguments.

The debate between the advocates of the two strategies or variants gives rise to an issue of controversy, namely the relationship to be established between general and vocational education.[3] Following the heated educational of the 1970s, discussion of this aspect virtually ceased. Moreover, it has no major implications for much of curricular development. Policy-making today is dominated by a segmented approach to general and vocational education.

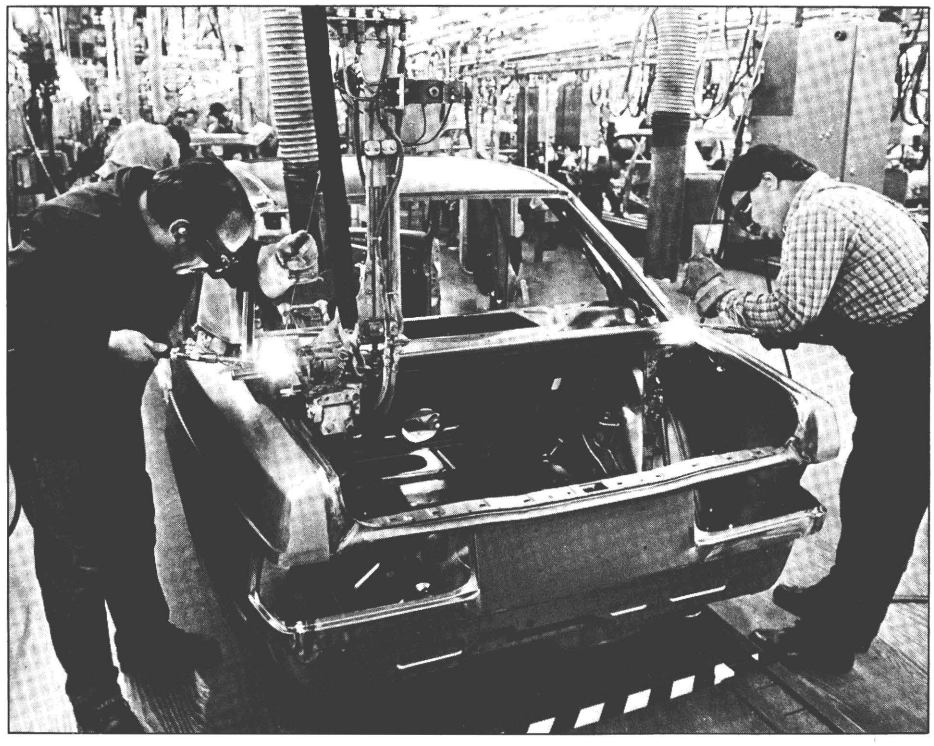
The causes of the failure of a more integrative approach are complex. One of the most important is undoubtedly the fact that the advocates of such educational reform have lacked a real counterpart in the employment system within society. A counterpart of this kind, geared to the sources of learning — inherent to work in that they increase the individual's participation and scope and raise qualification requirements[4] — would, or at least might have had, implications for the structure and shaping of vocational and occupationally oriented education. After all, the more work-oriented interests and educational aspects themselves become the object of vocational education, the more 'general' this education becomes. It is relatively easy — with hindsight — to point to a cause of this nature (however right it may be in itself), especially as employment policy has currently been pushed into the background by labour market policy, and labour market policy is primarily geared towards matching up supply and demand.

It would seem more appropriate to ask if the appeal for a closer link between general and vocational education was given sufficient thought at the time. Consideration of merely the most important arguments for the closer integration of general and vocational education,[5] we find that:

■ One set of arguments refers to radical changes in the employment system, subsequent labour market requirements and the acceleration of social change. The need for qualifications over and above those required for the actual perfomance of a job (known as process-independent or extra-functional qualifications) is one of the major causes of efforts to forge a closer link between vocational education and general education. Many objections have been raised to these arguments — sometimes described as 'technocratic' — in the past. It is doubted, for example, whether this link takes sufficient account of the social stratification

of the labour force, the lowest stratum of which shall not be participating in technical progress. A decisive role in this non-participation is played not only by factors in the milieu of origin, but above all by factors which prevent the upgrading of work and qualifications. Repetitive work does not, as a rule, motivate the workers in question to participate in education. Nor does it provide much scope for gaining experience that is valuable and useful outside the world of work.[6] It is easier to combine vocational education and general education in cases in which workers are able to gain broadly based occupational experience or experience of life or have time for reflection during their work. Favourable examples of this (in the past) are assembly workers, compositors and printers. In a sense, cigar-makers and shepherds should perhaps be added to the list.[7] In addition, the special way in which work is often implemented in the form of a specified segmentation of occupations may result in the compartmentalization of knowledge, abilities and skills and so constitute an obstacle to the integration of vocational education and general education.[8] A technician will perhaps tend to approach a social issue in his own, technical terms.

■ But the more 'emancipatory' arguments also have their weaknesses. They assume that vocational education itself offers points of departure for processes of general education, but that indiscriminate association with the occupational situation and occupational skills may obscure the adverse effects of the segmentation of work into occupations and resulting occupational experience. It is the task of general education to perform a corrective function in this respect, applying democratic principles to the shaping of work and highlighting the link between the development of qualifications and social policy. The weakness of this argument is that too much of the corrective or emancipatory function has been left entirely to an education strategy. This vision thus suffers from the absence of a progressive counterpart for educational reform policy in a labour policy; it also fails to take sufficient account of the material foundations for the relationship between vocational education and general education, i.e. development and learning processes which individuals and groups undergo in the framework of the working process itself. It has not been translated into sound concepts and models which could have been achieved, for example, via cooperation between curriculum developers and industrial and labour market sociologists.



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In short, the champions of these arguments have been unable to make it sufficiently clear to precisely what this corrective or emancipatory function of general education relates. Finally, in the basic premises and design of integration, insufficient consideration was given to vocational education as a separate institution, one of the integrating elements thus remaining a large, unknown quantity.

New developments

The traditional relationship between the dividing lines between the roles assigned to general education and vocational education are undergoing major changes which could not have been foreseen 10 or 15 years ago. This development is casting doubt as to whether the relationship between general and vocational education should be envisaged in the forms referred to above. These changes have been particularly prompted by important developments in the organization of work and in the labour market several of which shall be mentioned in the following:

■ General — including social — qualifications are becoming increasingly important for employment, not only for the work to be implemented at the workplace, but also for the way in which an occupation is practised in a wider sense and for the functioning of the organization of work as a 'teaching system'. Traditional qualification profiles are changing, and new occupations are emerging. A well-known example of the latter is the occupation of information scientist. Less well known are the sweeping changes occurring in the performance of existing jobs. For example, while thousands of unemployed welders are on the books of the local employment offices, there is considerable demand for welders on the labour market. This paradox is due to the change in occupational requirements. The traditional occupation of welder was simple, comprising two defined activities, autogenous welding and coated-electrode welding, the work was poorly paid and was not held in high regard. Today, the 'new welder' must not only have traditional skills, but also knowledge of the technology involved and its applications and in addition social skills. He is also required to check relevant calculations, to be familiar with new types of material and to be able to read drawings, regulations and operating instructions (sometimes in English or German). Understanding of and the ability to adjust and maintain intricate equipment requires not only welding skills but also a mastery of other activities, e.g. fitting.

The increased importance of general qualifications is also reflected in the current research into the emergence and functioning of occupations and occupational groups.[9] In this context, the development and continuation of occupations are perceived as a process in which a person in a given occupation attempts, on the basis of his or her expertise, to achieve a position of social power with the aim of controlling the market in that occupation. This gives expression to the supra-individual or institutional side

of work capacity. This perception is not in itself new, since it was on this basis that workers organized themselves in the past: painters, graphic artists, etc. What is new is the fact that it is not only the traditional occupational groups which are reorganizing themselves in this respect (employees in the printing industry, doctors) but that comparatively new occupational groups or offshoots of traditional ones are increasingly confronted with this protection of social interests or are themselves taking it in hand. Examples are information scientists, personnel officers, business administrators and even — though less successfully in some cases — graduates in such endangered disciplines as the humanities. An 'occupation', empirical research and practice reveal, thus comprises not only know-how and skills but also the protection of interests (within intricate social networks). General aspects of the action and learning involved in employment, such as the collectivization of the protection of interests, the achievement of autonomy with regard to the way in which occupations are pursued and the control of internal competition, are gaining momentum.

The third sign: new management strategies, geared to the opportunites offered by information technology, are far less designed to bring about work processes prescribed in detail than to create conditions in which decentralized, self-regulation groups are able to function optimally.[10] The 'key qualifications' developed in the 1970s, having been initially perceived as qualities of working individuals, thus also become qualities of groups and of (or in) organizations. Although for the time being these strategies primarily concern privileged work and are still far from keeping their promise of enabling the individual to develop his or her talents at work, it is already becoming clear that the traditional boundaries and distinctions between general and vocational education are fading in this context: vocational education (or a fairly large proportion of it) is becoming general education, and general education, where it does not concern vocational preparation, is becoming vocational education.

■ General and social qualifications are growing in importance, not only in the work process, but also on the labour market. Now that full employment is no longer the general norm, competition between workers is growing, triggering new requirements in terms of flexibility and mobility. This competition is forcing much of the working population to pay additional attention to keeping their labour available. This 'obligation' cannot be met by vocational education alone.

Furthermore, new forms of employment have now emerged, e.g. part-time work, home work, contracts for an unspecified number of hours of work and freelance work, making specific demands on the groups concerned. These demands, imposed on them as personal obligations, include the use of social skills, negotiation, the costing of networks and learning to combine various kinds of activity, e.g. employment, housework and bringing up children. They not only lead to an obvious demand for education, but are often catered for in informal educational processes. The obvious demand is directed at existing or new intermediary facilities, which are not organized in accordance with the customary standards of general and vocational education. Thus the flexible demand for education also breaks the traditional framework within which the relationship between vocational education and general education have been perceived: the assumed concurrence of the two is being abandoned, and integration is becoming more of a specific task than ever before.

Manfred VOLLMER

What then are the implications of these changes in the production process and on the labour market and their interpretation for the relationship between general and vocational education? In the last 15 to 20 years there has certainly been a growing perception of the functionality of general qualifications for the various aspects of the rapidly developing organization of work. In this respect, the abovementioned 'technocratic' arguments have been found to be cogent. This and other factors (leaving aside pedagogical motives) have probably generated increased interest in general education in education and training, as revealed, for example, by the introduction of 'basic education' and the 'adult vocational education' projects. If anything, this increased interest is, however, an indication of the desirability of improved coordination with vocational education. But it gives little indication as to how this improved coordination might or should be achieved or whether the increase in the proportion of general education and the fading of the line separating general and vocational education are sufficient in themselves.

In any case, when a new policy is introduced, social inequality is an aspect which must not be overlooked if further social segmentation and the permanent exclusion of formal work are to be avoided and flexibility and mobility are to be encouraged. It is important to note in this context that workers are showing a marked interest in education and educational leave, that this interest concerns both general and vocational education and that firms are willing to experiment with a balanced combination of these two elements.[11] The decisive factor will be whether this interest and willingness are in the long term actually based on developments in the work implemented. Is the promise of personal development at work implied in new concepts of work actually being kept on a large scale and thus not just for an élite, not just during a transitional phase of technological and/or organizational uncertainty and not just with the shrewd idea of mobilizing the workforce for the firm's own ends?

Reflective modernization as a challenge

So far we have advanced various arguments which indicate that the debate on the relationship between general and vocational education can and must, to a certain extent, be conducted along new lines. Reconsideration of these arguments shows that they are principally formulated in the context of sweeping changes in the organization of work, changes related to the wish to redefine the relationship between general and vocational education. From the angle of (potential) workers, one can say that an appropriate relationship between general and vocational education is one means of averting serious social risks to workers. These risks stem from an imperfect relationship between working and learning and are linked to changes in qualifications, the diversity of work, the coordination of work with other activities, in short with the inability to meet — even self-imposed — flexibility and mobility requirements. Satisfactory coordination of general and vocational education may thus be one of the answers to the various risks inherent to work. However, we can also isolate the term 'risk' from the classical context of work and apply it to what can be called with some reservations a 'risk-taking society'.[12] This opens up even more, new perspectives in the subject under discussion.

Social risks, as discussed in connection with changes in the organization of work, can be regarded as social consequences of the effect of the liberal market ideology on society. However, the risks created by technical and scientific progress, e.g. pollution, food poisoning, radioactive contamination and invasions of privacy, are of a different nature: they often create irreversible damage, are frequently global (and so affect man, the flora and fauna) and do not simply observe the stratification of society into classes (they have, or may have, a boomerang effect on those who create them). These risks — and this is important in the context of the subject under discussion — are frequently not immediately perceptible to human beings. Causal interpretations are necessary if they are to be regarded as needed as risks. To some extent, then, such risks are created by scientific know-how, and they can be modified, increased or reduced, dramatized or trivialized by know-how or knowledge. This makes them particularly receptive to social definitions. The media, political networks and occupational groups thus acquire key positions in the definition of the nature and consequences of these risks.

New social movements have hitherto been the principal frameworks within which a wide-ranging debate on future society has been conducted. In this debate, the process of modernization is itself presented as a problem and an issue, whereby the need for *reflective* modernization is stressed: reflection on how to counteract or channel technical and social risks generated at the most advanced level of the development of the forces of production. As an issue, modernization *within* the frameworks of industrial society is extended to include or is even radically replaced by modernization of the conditions and ideas on which this society was based: the concept of science and technology, and also the forms of life and work in employment and the nuclear family, the traditional roles of men and women.

Discussion of all the implications of such a vision of general and vocational education and the relationship between them would take us beyond the limits of this paper and — let us be honest — the consequences simply cannot as yet be clearly formulated. A number of conclusions summarized in the following three points, can nevertheless be drawn:

■ Along with the media, conferences, etc., the institutions which provide 'general education' and 'vocational education' could be transformed into places where work is conducted on the development and dissemination of critical knowledge, i.e. knowledge which helps to define these risks appropriately, or where the individual is at least taught to make a constructive contribution to the production of this knowledge. For vocational education, an important socialization institution, this means dissociation, not from the demands made by the future occupation, but from naturalistic (i.e. strictly technical and scientific), criteria in the appraisal of technical processes and innovations. This implies the combination of substantial technical know-how and its applications with the social and cultural importance as a consequence of these applications. However, the objective should go beyond mere learning and include the estimation of the consequences of technical innovations or gaining social acceptance for these innovations. The main aim should be constructive anticipation to ward off these risks and the development of alternative technical instruments and appliances with the aid of specific know-how able to compete in the struggle for the correct know-how and knowledge. This task also presupposes a broader concept of the term 'occupation' by which vocational education should be guided. The protection of interests in complex social networks, referred to earlier, must go hand in hand with orientation towards the global prevention of the adverse consequences of industrial modernization. As a result, aspects of professional ethics are also involved.

■ 'General education' (for children and adults) similarly faces the challenge of participating in the search for an appropriate definition of unacceptable social and technical risks. To some extent, it is already active in this field, e.g. in teaching on peace and the environment. However — as in vocational education — it shall be necessary to develop concepts for general education following on from these problems. If these concepts are fitted into the existing forms of 'in-built education' (e.g. in social movements),[13] so much the better, since general education will then be associated with the practical expertise existing within these movements. However, there should also be more explicit cooperation with occupational groups which are outstanding examples of the industrial and technical complex: engineers, information scientists, communications experts, biologists, physicists and chemists. A dialogue of this kind could provide objective information and usher in a debate within these occupational groups on the limits to and opportunities for technical and industrial modernization on a basis of equality. If would therefore also be possible to attract not only traditional groups, but also, for example, members of the technical intelligentsia, thus counteracting any bias towards the humanities or social sciences.[14]

■ The assignment of an important funciton to general education, especially for adults, in the debate on 'risk-taking society' contrasts with the marginal function assigned to this sector by official education policy. Cost-saving considerations may play a role in this respect, but cost-saving — as everyone knows — also has idealistic or ideological components. One of these components, in our opinion, is the view that general education — for adults — should principally take the form of self-education. The individual himself or herself is then assigned the role of bringing together various components of knowledge in a global view, regardless of whether or not it has any philosophical legitimacy. Self-education naturally has a crucial function to perform: it is a precondition for equal participation in the debate on risk-taking society, and the individual's ability to absorb knowledge is probably more developed than was

assumed in previous theories on the link between general and vocational education. The main point, however, is that general education is eminently suited as a medium in which *public* communication on the limits to and opportunities for industrial, capitalist modernization can be achieved. If the struggle for appropriate know-how and knowledge is a basic element in risk-taking society, it must be possible for this struggle to take place openly and in a verifiable manner. The individual aquisition of know-how does not make the public debate superfluous: on the contrary, it is in a debate of this kind that the truth and accuracy of this know-how are put to the test. Anyone who economizes on the medium of 'general' education also economizes on the public exchange of knowledge and thus on what we, like Beck, have termed 'reflective modernization'.

Footnotes

1 This article is an edited version of a paper given at the symposium on 'Volwasseneneducatie — uitbouwen en "inbouwen"' on the occasion of the retirement of Dr Rob Hajer from the Catholic University of Nijmegen on 30 October 1987.

2 See, in the Dutch literature, 'Informatie en onderwijs', special issue of the journal *Informatie en informatie-beleid,* December 1986; 'De computer en het onderwijsleerproces', special issue of the journal *Pedagogische Studiën* 64 (1987) No 9; 'De computergeneratie', special issue of the journal *Jeugd en samenleving* 17 (1987) No 3/4. Examples of relevant literature in German are: K. Haefner, *Die neue Bildungskrise. Lernen im Computerzeitalter* (Reinbek bei Hamburg 1985); several articles in: H. Heid and H.-G. Herrlitz (eds), *Allgemeinbildung. Zeitschrift für Pädagogik,* Supplement 21 (Weinheim and Basle 1987), and the articles by F. Rauner and H. G. Rolff in: G. Kraayvanger, B. van Onna and J. Strauss (eds), *Berufliche Bildung und Arbeit. Ein Vergleich zwischen der Bundesrepublik Deutschland und den Niederlanden* (Nijmegen, 1988).

3 In Report No 27 by the Advisory Council on Government Policy, *Basisvorming in het onderwijs* (The Hague 1986), for example, virtually no attention is paid to this aspect. It is, however, considered in *Preadviezen over de relatie algemene basisvorming en beroepsopleiding* (R. Bronneman-Helmers *et al., Werkdocumenten basisvorming in het onderwijs* (The Hague, 1986).

4 See B. van Onna, 'Arbeid als leersituatie', in: G. Kraayvanger and B. van Onna (eds), *Arbeid en leren. Bijdragen tot de volwasseneneducatie* (Baarn, 1985).

5 See the summary in: R. Hajer and G. Kraayvanger, 'De integratie van algemene vorming en beroepsvorming', *Vorming* 28 (1979) pp. 325-337 (with references to the literature). See also: E. Wieck, 'Arbeidersvorming als synthese van politieke vorming en beroepsgerichte kwalificatie', *Tijdschrift voor Arbeid en Bewustzijn* 11 (1987) pp. 454-473. On the concept of general education see: A. Rang, 'Over de betekenis van het element "algemeen" in het concept van de algemene vorming', *Comenius* 7 (1987) pp. 49-62.

6 See *Over sociale ongelijkheid,* Wetenschappelijke Raad voor het Regeringsbeleid (The Hague, 1977); C. Doerbecker and B. Hake, 'Educatieve motivaties', *Tijdschrift voor agologie* 8 (1979) pp. 187-206; W. Schulenberg, H.D. Loeber, U. Loeber-Pautsch and S. Pühler, *Soziale Faktoren der Bildungsbereitschaft Erwachsener* (Stuttgart, 1978).

7 See H.P. Bahrdt, 'Arbeiten — Lernen — Erfahrung', *Hessische Blätter für Volksbildung* 32 (1982) pp. 234-239.

8 See U. Beck, Mr Brater and H. Daheim, *Soziologie der Arbeit und der Berufe* (Reinbek bei Hamburg, 1980).

9 *ibid. See also: J. Geurts, Aankomend vakmanschap als beroep* (Nijmegen, 1986).

10 See C. Argyris and D. Schön, *Organizational learning: a theory of action perspective* (Reading, 1978); *G. Morgan, Images of organization* (Beverly Hills, 1986); B. Garratt, *The Learning organization* (Aldershot, 1987); H. Kern and M. Schumann, *Das Ende der Arbeitsteilung?* (Munich, 1984).

11 See C. Doets and Y. van Pieterson, 'Meer dan de helft wil "zeer zeker" met educatief verlof', *Vorming* 34 (1985) No 8, pp. 36-45; K. Bokhove, N. Dirks, C. Doets and M. van Waalwijk, *Betaald educatief verlof in de regio Nijmegen.* Gemeente/Aktieplan Werkgelegenheid (Nijmegen, 1986); N. Dirks and C. Doets, 'De haalbaarheid van educatief verlof', *Vorming* 36 (1987) No 2, pp. 19-30.

12 The term 'risk-taking society' was coined by the West German (industrial) sociologist U. Beck. See U. Beck: *Risikogesellschaft. Auf dem Weg in eine andere Moderne* (Frankfurt, 1986). We use the term 'risk' in conjunction with 'society' with some reservations, because it is unclear whether it reflects the qualitative difference in risks with sufficient subtlety (e.g. risks emanating from armament and reproduction technologies, biographical uncertainty due to the 'de-linking' of the education and employment systems and the description of the problems connected with sex ratios). For a critical discussion see: R. Roth, 'Auf dem Weg in die Risikogesellschaft?', *Sozialwissenschaftliche Literaturrundschau* 10 (1987) pp. 19-25.

13 See T. Jansen and A. Loog, *Educatief werk en Derde Wereld Beweging. Verslag van een verkennend onderzoek.* Instituut voor Sociale Pedagogiek en Andragogiek (Nijmegen, 1987); T. Jansen and A. Loog, 'Sociale Bewegingen, een leerzame ervaring voor de volwasseneneducatie', *Tijdschrift voor agologie* 16 (1987) pp. 75-90.

14 Examples of such innovative practices are the interdisciplinary post-graduate environmental training provided by various Dutch universities and the 'Workshop of the Future' organized by West German adult education centres. On the latter see: *Zukunftsphantasien — (k)ein modischer Trend?* Landesinstitut für Schule und Weiterbildung (Soest, 1987).

The future of education in Europe

Statement by Professor Alfred Grosser, Paris, at the 2nd European Congress on Continuing Education and Training, held in Berlin on 27 and 28 October 1988

In France some members of the country's future élite have very little desire to take a general look at the basic problems facing our society. I have noticed this at our Ecole Nationale d'Administration and at our largest commercial college: the attitude is technology — yes, continuing training — wonderful, future propects — yes, but fundamental reflection casting doubt on oneself is of far less interest, especially if it doesn't bring you any marks in the examinations. We must insist that initial and continuing training are not only meant for those at the bottom of the ladder whom we would like to help but also for those at the top. They must be helped to understand society and thus to understand where they are.

Let me give an example to illustrate this: in France, when the *crème de la crème* go to the École Polytechnique, for the first time in their lives they are removed from society for two or three years to study mathematics for 60 hours a week. These are the employers of tomorrow. Although they will have never attended a single lecture on social legislation, they will nevertheless be in charge of some enterprise. And this partly explains why the French railwaymen's strike in the winter of 1986/87 was so uncompromising.

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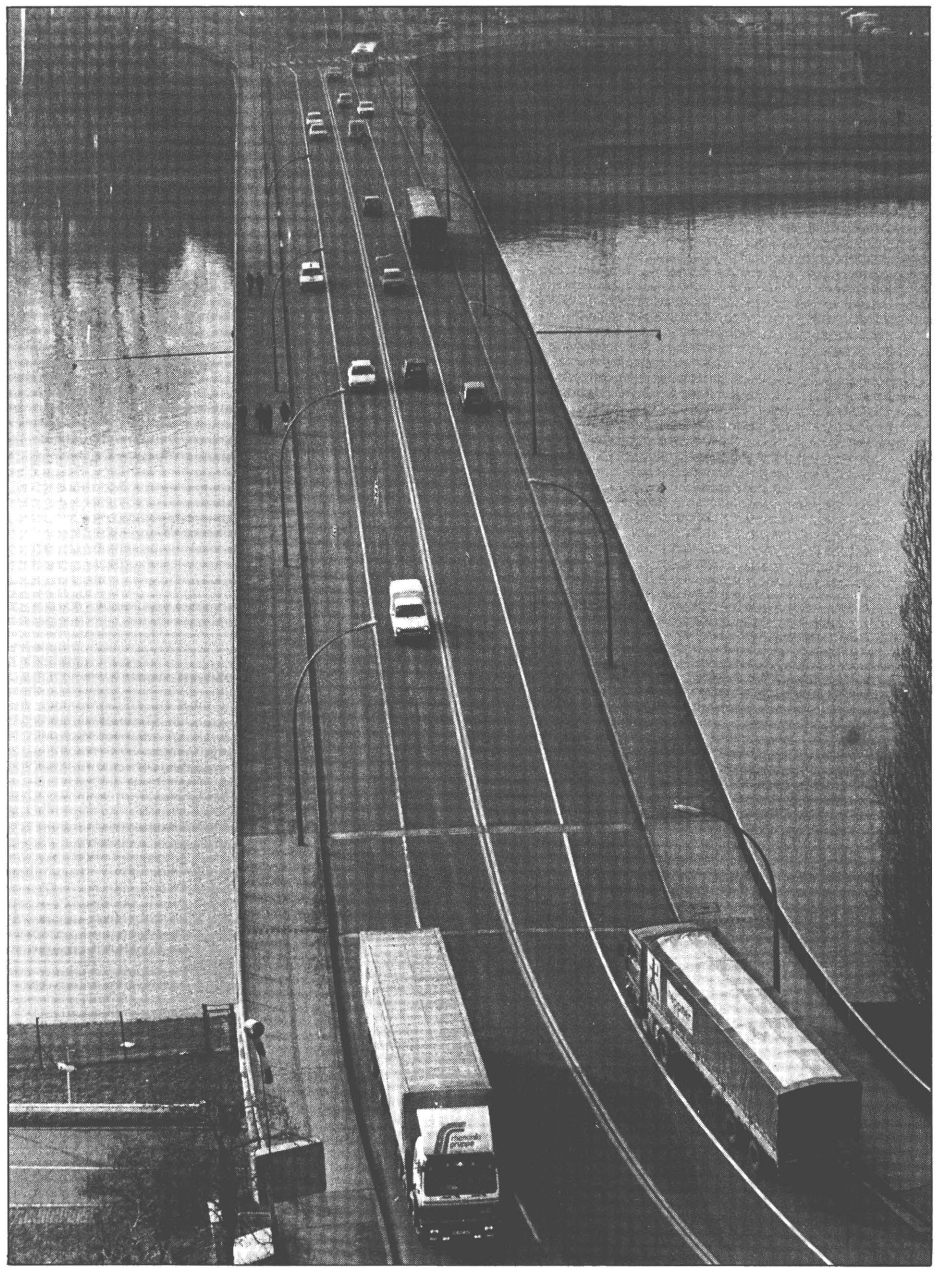
Awarded the Peace Prize of the German book trade in 1975



Haid/DPA

There are a number of interrelated factors requiring clarification. The nation is of fundamental importance. However there are other factors — women, for example. In the Federal Republic of Germany women are very aggressive, sometimes too aggressive to my mind. Nevertheless, despite centuries of education and *counter*-training, partly by the churches, humility remains the greatest virtue.

Let me tell you a little story, which is supposed to be true. The following experiment was conducted at an American university. An essay was written. A hundred copies were made and distributed to a hundred girls. Fifty were told the author of the essay was a boy, the other 50 that the author was a girl. The vast majority of those who were told the author was a boy found the essay intelligent. Most of the 50 girls who were told the author was a girl thought it was stupid. That is the result of centuries of a certain kind of upbringing.

It is not only a question of discrimination of women by men but also of long-lived and habitual self-derogation by women themselves. The upbringing of girls and the training of women is not only a matter of learning; it is also a question of understanding that one is worth more than one has been told. In some societies this is already increasingly the case. But the situation in Spain, Portugal or Greece is the same today as it was in the United Kingdom or Germany a few decades ago. Most of the work to teach people self-respect has still to be done. This too is training and should also be part of education.

There is of course also the question of the nation and the sense of belonging to a nation. Let us take France and the Federal Republic as examples. In France, many people still take a lot of convincing that we are not perhaps so much of a superpower as they would like to believe. It was not, after all, absolutely normal when, for example, General de Gaulle told us one New Year's Eve that 'our goals, because we are French, are in the interests of all mankind'. In this respect, there is a great deal that needs to be unlearned. But this education centred on 'la nation' did at least have two advantages. One lay in the nationalistic teaching of the nation's history, which I myself experienced and assimilated. Thanks to those history lessons at primary school, I have become a Frenchman through and through. When I first said in a lecture 'in 1914 we did so and so', I was, of course, referring to the French army, although my father was a captain in the German medical corps for four years. Thanks to this nationalistic education Joan of Arc really is my great-grandmother, Napoleon really is my grandfather, and Goethe is for me a sometimes interesting, an often boring, but certainly a foreign poet!

And the second advantage is a sense of shared responsibility for the world. I have great difficulty explaining in France why so many people in the Federal Republic want nothing to do with shared responsibility. If I were a citizen of the Federal Republic, I would have been rather ashamed when the Nobel Peace prize was awarded to the UN peace corps three weeks after a debate in the Federal Republic in which it was stated that German soldiers would never be assigned to peace-keeping duties where they might be required to die, but not to kill. And I always say in France — and this is education — that, because of Hitler, it is almost inconceivable that German soldiers will be sent outside Europe.

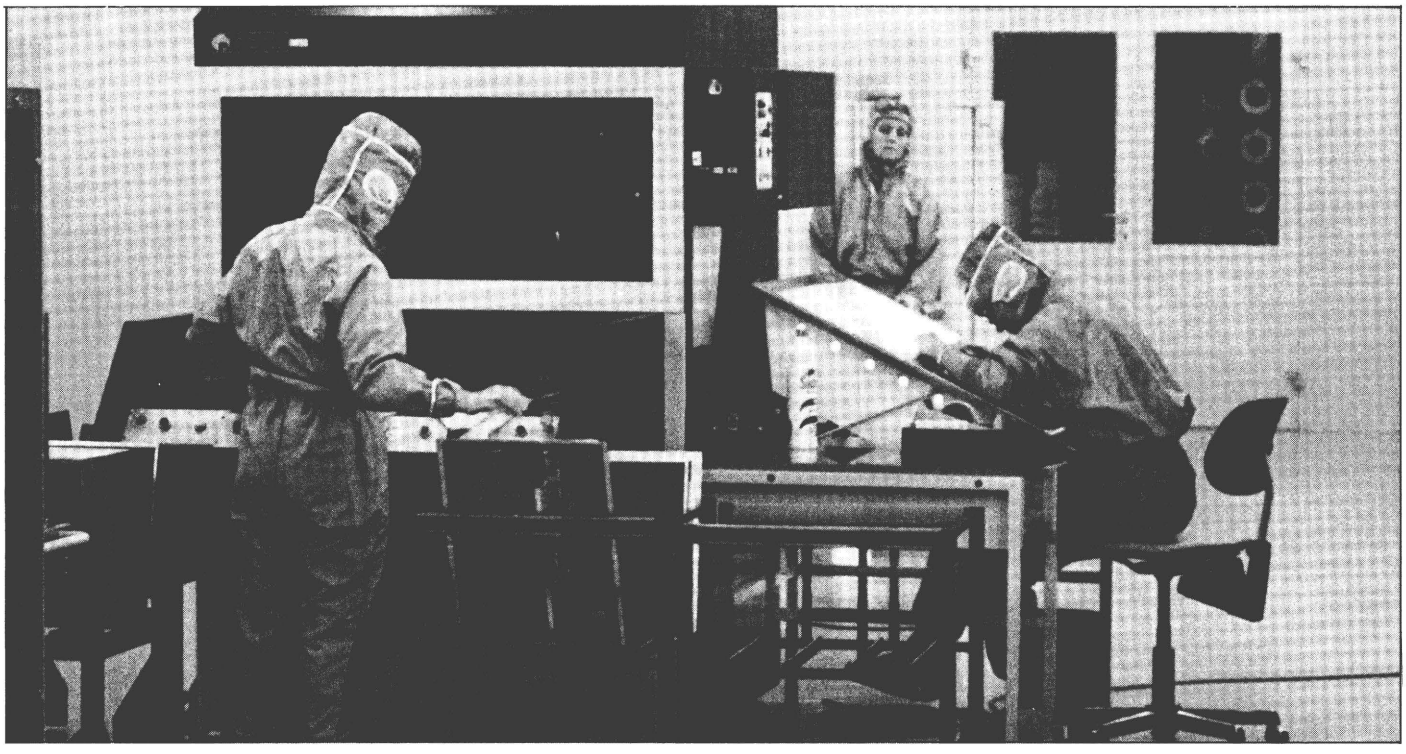
If this historical basis for an attitude has not been taught at school, it is our task to teach it to serve the objective of the construction of Europe. To create Europe, it is absolutely essential to explain the circumstances in which others live.

We must try to undo what has become a sad Lutheran tradition in Germany, namely the equation of occupation and vocation, as if there were no more to man than his family life, his tasks and his obligations in family life and at work. He is also a citizen and a member of society. And he must therefore reflect on the form of the basis of his actions.

Let me give you two examples from my work in continuing education and training. A few weeks ago I was at a conference of the federation of technical associations, i.e. associations of engineers, technologists and so on. Their aim was to reflect upon the ethical responsibility of engineers. Now that's what I call real education! And last week I spent a day with 200 senior French police officers. They have formed an association (*Police et Humanisme*) and had met to consider how the police can be organized in such a way that excesses can be prevented and what should be done if they occur, how a policeman should conceptualize his profession without being naive, but to ensure that the legitimacy of the power he has to exercise is not affected by its being used illegitimately.

This is part of the professional ethos of a society in which it is sometimes automatically thought that either people know what to do in their work or we throw them out. For me, it is like entering

Manfred Linke/LAIF



Manfred VOLLMER

a ghetto in an attempt to help, to break down the walls surrounding that ghetto.

I do not know if you can imagine how many occupational and status ghettoes we have in the Federal Republic of Germany. It is not only a question of the ghettoes of the Middle Ages. I am thinking of the various neighbourhoods of New York when I say that a ghetto means banishment, and it also means self-isolation. And both these phenomena must be overcome by both sides. This is true of ethnic minorities just as it is true of occupations. Reflecting on occupations with a sense of responsibility towards society as a whole is part of our work as trainers. Talking about young workers who cannot find jobs also has something to do with how other social groups view themselves and isolate themselves.

This work is based on fundamental values on which, I am glad to say, there is a fair measure of agreement nowadays. In France there are believers and non-believers, atheists with humanistic principles. In the Federal Republic there are only those who pay church tax to the Protestant or the Catholic Church. It is very difficult to tell if they are believers or not, because it is not the done thing to admit to being a non-believer. In France today the Catholic Church and the very small Protestant Church are engaged in a very wide range of joint activities. They speak the same language.

An example of this overall responsibility is a text published by the Le Mans synod. It calls for children to be taught about other cultures and religions at school. It is a question not only of human rights but also of emphasizing the right to work, the type of work in which the individual can develop his potential (*épanouissement*). It is a question of the Christian's duty to commit himself, not by saying 'I am a Christian', but by accepting his Christian responsibility to stand up for work of this kind in the name of justice, and to do so with people who are non-believers.

In 1980 Pope John Paul II said in Paris that the values of the French Revolution — liberty, equality and fraternity — are also Christian values. The popes of the 19th century, so I have been told, turned in their graves like dervishes at the very thought. But this rediscovery of Christian values by the Churches in the sense that the suffering, the oppressed are our neighbours, even if they are not Christians and even if they are oppressed by Christians, is also something of concern to us all in our training activities.

We are in favour of making people freer. Freedom should be increased by knowledge and learning, under two conditions: first, people should not regard this freedom as something they can do something with. I have nothing against divorce in itself, which is just as well, or I would not have any friends left in Germany. I do not really object to a Catholic priest being able to leave the Church, provided that it is not said that, in so doing, he is exercising a freedom, but that it is first said that his action is the consequence of failure. Because people have used their freedom to do something long-term. Freedom in its highest form is the eventual conversion of freedom into a commitment. This is also a question of vocational training. If we say, as we did in the late 1960s, that freedom consists in being able to do one thing today and the opposite tomorrow, then that it is an antisocial freedom, a freedom that no longer involves any commitment. The difficulty lies in freeing people from their ties, from the factors that determined their actions, without wrenching them out of society, without isolating them — in other words, without depriving them of all hope and purpose.

And if you thought continuing training was just vocational training, you were wrong. And if you think vocational training is not part of education, you are wrong again. I hope I have shown you that the two belong together.

Educators and trainers: is there a difference?

A father or mother who takes a child by the hand to ford the river shallows, to cross a road or to use a pedestrian crossing at a junction is reproducing the oldest of all the hundreds of gestures in the educational relationship, the gesture that links the parent to the child, the teacher to the taught.

Only in relatively recent times have the family's educational responsibilities been transferred to specialist teaching establishments. Free, compulsory primary education is not yet a century old in Belgium, and State-run vocational and technical education was in general introduced after the Second World War.

The family — the extended family, for it included not only the parents and their many children but several generations of relations as well — once formed a highly varied network of communication, transmitting a wealth of unchanging and eternal truths handed down from time immemorial, truths that were little affected by the succession of generations or the passage of time. Those truths included the values associated with the means of survival, in a world where change was barely perceptible in a man's lifespan.

Not until the first industrial revolution and the uprooting of ever larger communities from their villages and land were families first offered substitutes who would take over the educational function. The Church had initiated the process for other reasons, but the economic powers-that-be were to do the rest, cultivating new values that had more to do with the individual than with the group. Learning a trade, gaining manual skill in a vocation, the social recognition of such skill expressed in financial benefits, the outward symbols of this recognition such as diplomas and paper qualifications: these were some of the values that the new techniques helped to bring to the largest possible numbers.

The vocational school — 'real' school as the Germans have it — was not, then, in the mainstream of the schools where the children of the élite in power studied the humanities. It was a new departure, a response to the need for vocational training among groups of workers newly arrived on a labour market that was becoming organized, a market that demanded more diversified skills from each individual. It was no coincidence that these early schools should have been set up by large industrial concerns in the form of 'company schools', as well as by regional political authorities fired by the ideals of Christian Democrat and Socialist trade unionism.

The vocational school thus came at the bottom of the school educational ladder. At the top was general education, leading to the university and to colleges training people for the professions.

The reputation of a school was measured by the formal nature of its syllabus: Greek and Latin, Latin and mathematics, Latin and science, mathematics on its own, economics. A pupil failing his examinations was regarded as falling from grace; he would slide down the scale of values to the bottom level, to technical education and vocational education.

In Belgium, it was a major victory for educational reformers when in the 1950s technical education was renamed 'technical humanities'. In practice it was the beginning of an upward move, in which the democratization of education was combined with a greater formality of curricula. Under different names, the same process was occurring in southern European countries. The very term 'vocational training', or 'training' pure and simple, was attached to the learning of manual skills and the whole range of practical expertise.

It was in the 1960s that equal opportunities to take the educational path of one's choice seemed to have been won. It was a time of full employment and high wages earned even by unskilled workers, and the children of less well-off families were no longer forced by circumstances to leave school and take a job so that they

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could make a contribution, however meagre, to the family income. From this point, over 60% of Belgian children stayed on after the minimum school-leaving age and continued their education to the age of 18.

Unfortunately, it takes 20 years to change a school educational system, and the system planned in 1960, when a buoyant economy was expected, was in fact set up in 1980 right in the midst of recession. Lacking the financial resources, the changes were to come up against a counter-revolutionary reaction.

At present vocational training is a subject of universal debate. Lack of training is blamed for youth unemployment, educational setbacks, the marginalization of ever growing groups of people, the shortage of skilled manpower and even the economic crisis itself!

Vocational training, so despised up to now, has at last come into its own. People engaged in vocational training and above all those unwilling to be involved now want to be in on the act and be part of the various schools of thought, which can be summarized by two dicta:

'we are engaged in vocational training'; and 'there is no difference between education and training'.

1. 'We are engaged in vocational training'
It is interesting to note the vogue now being enjoyed by the concept of vocational training in higher education — an infatuation common to all industralized nations.

■ The first to go in for vocational training were the establishments parallel to State-recognized university departments. State recognition is a vital factor, for in terms of resources it opens up a number of opportunities embodied in laws and regulations. In practice, in other words, it gives access to public money. The higher education establishments parallel to the universities found they were being excluded from certain sources of funds by non-recognition. First they were not recognized as being university-level diploma-awarding teaching units, with the right to teaching staff subsidies and student grants. Secondly they were not recognized because of the difference of emphasis in their curriculum. They worked in the field of applied rather than pure science, the latter being regarded as the province of the brain and the intellectual, the former as the province of the hands and the manual, even if those hands wielded a pen and were very soon to operate a keyboard.

Sally & Richard GREENHILL

Users and employers on the labour market, however, made no such distinctions. When the age of economic recession came, bringing in its wake unemployment for youngsters emerging from the educational system, the non-university higher education establishments found themselves vindicated.

The reason was that the curricula of those parallel forms of education were realistic enough to meet employers' needs for supervisory staff. People coming from that stream of education not only possessed much appreciated practical expertise but, even more important, they were able to react more rapidly and more productively to change and transformation than did traditional university graduates.

■ The universities themselves have become far more interested in vocational training. In certain university departments, the teaching and research staff have long been visibly concerned with the results of their teaching and research when it comes to the application of what has been learned. Everything related to educational methodology points in this direction. If the goal of those who are learning is merely to obtain a diploma and a paper qualification, the evaluation systems and methods will continue to be just as much a matter of form as the goals themselves. University establishments still find a good deal of their *raison d'être* at this level, but they are displaying a noticeably fresh interest in training. Can it be that they have become aware of the recession ant its economic and social effects at a time when the terms of the problem are being altered by business recovery? Is this yet another instance of the time lag in bringing about educational change?

A professor of history has told us how concerned he was about his former students who had left university with their diplomas but, being unable to make profitable use of all the attainments for which they had worked so hard, were talking about a change of direction, the acquisition of other skills, retraining. Historians, however, know that the problem has been with us for over 20 years.

A few months ago, all the researchers from European Community countries at a forum convened in Berlin by CEDEFOP made the same observation on the growing interest of universities in job-related training measures.

■ It is also true, paradoxically, of agencies for social advancement — the workers' education movement — which are closer to basic training systems. We use the word 'paradoxically' because it may be surprising that an adult education movement should not have been very much aware of the use its worker students made in their daily work of the education they were receiving.

This was, however, noticeable in the curricula, methods and evaluation of evening courses, the 'last-chance' education to which workers unable, often for financial reasons, to take advantage of the opportunities afforded by 'daytime' schools came to seek recognition of their attainments, however belated.

Up to a short time ago, evening courses offered workers handicapped by the lack

of opportunities at the time they had reached school-leaving age exactly the same curricula as those laid down for younger people. The courses adopted the same methods, without allowing for the greater maturity and work experience of adult students. They took place in the evening after students had worked all day, and lasted three or four or even more years, depending on the level aimed at. The courses made such great demands on the students as to give rise to a suspicion that the interest displayed by employers in those completing them was in their moral qualities rather than in their newly acquired knowledge as testified by their diplomas.

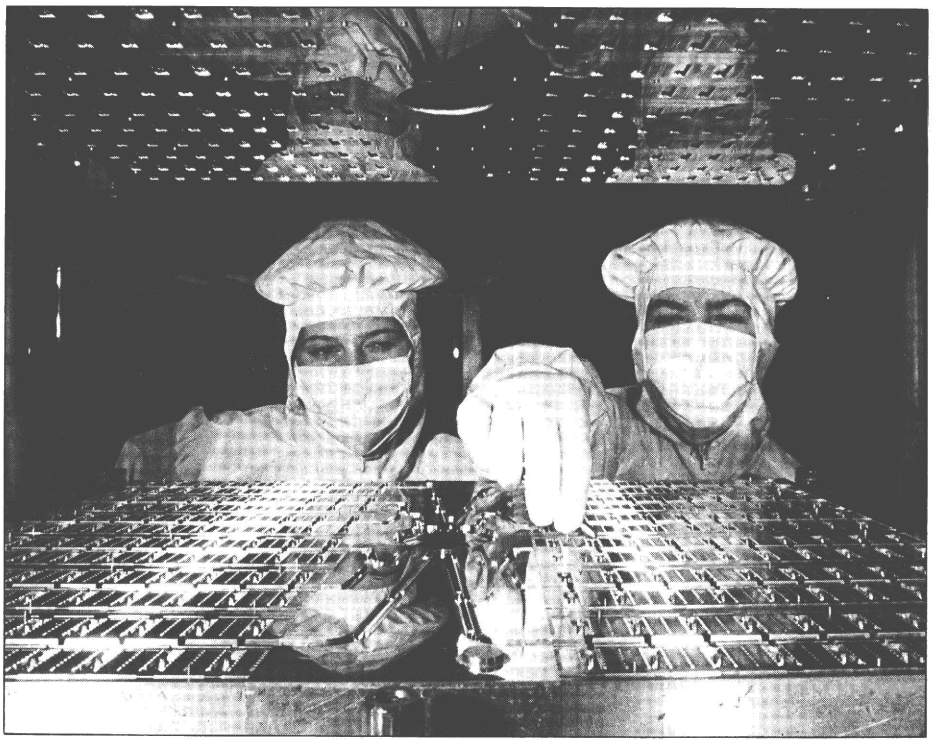
In Belgium, regulations were issued permitting short, modular courses meeting clear-cut goals, but not until 1978, more than a decade later, were they brought into effect.

When the school-leaving age was raised to 18, the same principle as adopted for remedial, last-chance courses was applied to what was know as the 'straggered-timetable' higher education. The same observation could be made as before: arrangements for young people were transferred wholesale to the education of adults.

None of the 'facilities' devised by successive lawmakers to promote remedial education and create equality of opportunity — study time credit (paid leave of absence from work for the purpose of study), sabbaticals for education — have made much impact on workers, even those already enrolled in courses, probably because the official measures were not forceful enough to warrant the effort demanded.

Partly because of recession, evening courses and adult education courses found a new target group among the jobless. Evening courses were even turned into daytime courses, and the curricula were overhauled. Modularization came into fashion, and it became possible to add on partial certificates, creating a bridge between students' aspirations and employers' expectations. There was a return to vocational training, which was distinguished from cultural education.

■ Employers, as is natural, have always expected schools — particularly technical and vocational schools — to supply the labour market with school-leavers who could satisfy their needs in terms of vocational qualifications. Belgium is unlike other countries such as Germany in that employers have always



regarded their role in matters of training as being confined to showing the youngster arriving on the shop-floor fresh from the schoolroom how to do the job and to keeping employees abreast of new techniques and methods introduced in their own workplace. A very different attitude was adopted by employers in the 19th century, the original providers of technical education. The situation il aslo very different today when, in proposals for alternance training, certain employers' ferderations would like their member firms to help train not only their own workforce but also school-leavers about to come onto the labour market — a market that obviously includes but is not limited to those firms. The feeling is that changes are afoot in the corporatism of both teachers and employers, although they may come about for different reasons. Each side is opening the gates of its ivory tower to the other.

Employers seem to have realized that they cannot expect educators to be able to train young workers entering an unknown world unless an intermediate space is created in which teachers and company trainers work closely together, drawing on the resources that only in-house trainers possess and are familiar with. Teachers, traumatized by the fact that the youngsters leaving them with diplomas could not find employment, have realized that the ambiguity of objectives developed in general terms was one of the reasons for youth unemployment existing side by side with an unsatisfied demand for labour.

These, then, were the reasons for the new interest in vocational training among all the agencies concerned!

Barely had this movement made its effects felt when the second dictum made its appearance.

2. 'There is no difference between edcuation and training'

At the time of reforming secondary and higher education, in the revision of curricula and, more generally, in the organization of studies, there was a move towads rejecting job-related objectives at the same time as the school-leaving age was being raised. This being so, there has been:

■ A general lengthening of the duration of studies. Where two years used to be thought necessary for obtaining a diploma, three are now required. Instead of three years, a course now lasts for four. Instead of four, five, and so on. Specialist studies are being delayed as long as possible, and general studies have lengthened.

■ The inclusion of versatility among educational goals. A student must train to change jobs, move from one employer to another, switch careers. He must, then, be trained not to belong to a single company nor even to a single trade.

■ Transferability of skills. Transferable abilities are being acquired in subjects whose relevance has been highlighted by the demands of a job. Just as the study of

Latin was used to train the mind for any form of logical thought, curricula no longer feature subjects taught for a limited purpose.

The reactions of the professionals tended to be in favour of parallel training routes focusing on needs. Farmers were made the responsibility of the Ministry of Agriculture, craftsmen the responsibility of the Ministry for Small Firms and Traders, industrial workers the responsibility of the trade federations (building industry, metallurgy, transport, textiles, banking, insurance, etc.).

It was a way of correcting the job market to compensate for the inadequacy of youngsters emerging from the educational system compared with employers' expectations. It was even said that such forms of training were an antidote to the rerouting of technical and vocational education, which had been taken back into the fold of general education.

Since general education had rediscovered the virtues of vocational training, however, it seemed logical that compensatory action should no longer be necessary and that any new action would be superfluous. As a result, schools made an effort to return to parallel forms of training in a quest for economy and an effort to recover the responsibilities they had lost, and also out of a desire for greater clarity as to the resources deployed.

These concerns, however laudable, barely conceal the radical crisis being experienced in the world of educators. The decline in the birth rate, which has made great inroads into the nursery and primary school population, is now making its effects felt in secondary education, placing at risk the jobs of teachers that have traditionally been protected. The substantial budgets used by schools have been frozen, the portion that can be applied to modernization being reduced to derisory amounts compared with fixed overheads. Money has to be found elsewhere, even from the sister field of vocational training whose limited resources still include flexible funds that can supply a breath of oxygen to the accountants in charge of public monies allocated towards education. This means that no differentiation is being made between education and training anymore, everything being grist to the mill.

This reaction, we feel, this return to old forms of education in an archaic institutional setting, is dangerous, not just because of the value of retaining flexible resources that can be rapidly deployed to meet training needs arising from technological change, but above all because the world of trainers must be open to the changing forms of learning adopted in the working world in our industrialized countries. The characteristics of those new forms of learning are probably as follows:

- A revival in the importance of the family, not the nuclear family but the broader family that extends to youth organizations, the church and the world of leisure which is socially and culturally close to the living environment. This family world should once again play an essential role in the education of young people and in continuing training.

- A greater interaction between the family and professional educators in the sphere of initial training. In the industrialized world, apart from difference still arising from certain discriminating circumstances, any inequality of opportunity can be regarded as associated with heredity, even though progress in health matters has caused many of those difference to dispappear. There should no longer be a borderline between trainers inside and outside the family, each one unaware of what the other is doing.

- The role of trainers and educators (now that there is no longer any difference between them!) will be less and less to be in contact with those being taught and more in the nature of permanent family counselling, making available to the families specific programmes and special resources that will help to meet their needs.

In particular, media-based distance training should place training resources on a par with the resources used for leisure and relaxation and break down the barriers between work and rest.

- In the same way, working hours — shorter perhaps, but certainly less confining — should always allow time for education and training (including job training) for the lifelong continuation of the work initiated by the family and taken over by the school, in cooperation with the educational world.

In this sense, training is indeed one form of edcuation. It is not, however, the poor relation of education, for it is the only part that can be evaluated qualitatively and objectively.

Leaving aside the corporatist reactions of those teachers who seek to perpetuate their scope for action made possible by the inability of families and the refusal of economic circles to perform a social role, (for this corporatism is waging a rearguard action), there are hopes of a growing awareness of the trend towards continuing education and training. In this movement every citizen, to a different degree and at different times of life, with differing aims and resources, will in turn be educator and student, trainer and trainee.

All this might seem Utopian did we not know from real life that a growing body of workers is being pensioned off soon after they have acquired their skills, their brains like instruments fashioned out of precious metals that are placed in museums before they have been put to productive use. The diplomas being awarded in ever greater numbers are being used to paper the walls of retirement homes.

Each phase in the development of a person's life is part of a process by which that person is enriched and involved in a common movement. The resources he is offered are varied, tailor-made to the goals pursued. It is a mode of employment, the learning of a manual skill. It is an experience leading to a profound transformation. It is a chain reaction of meetings and relationships and, for some people, creativity.

Education and training must not be a rigidly planned route from nursery school to the working world, imposed on those who do not know by those who say they know.

Integration of vocational and general education —

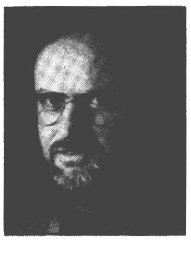
An educational task and a political challenge for the future

The trade union debate

It is almost 20 years since the Federation of German Trade Unions focused on the integration of general and vocational education at the upper secondary level of the education system in its statements on education policy at its 1970 congress on vocational training. 'General [secondary] education is the vocational training of the dominant, vocational training the general education of the dominated.' This was how Erich Frister, the then chairman of the Education and Science Union (GEW), described the social nature of the Federal Republic's education system in his address.

As the division of the education system into institutes of secondary (general) and vocational education consolidates — to use Marxist terminology — the class structure of our society, Erich Frister told the assembled trade unionists, the integration of general and vocational education is a major challenge for social policy.

If there is to be real integration, the content and learning methods of general and vocational education must be regarded and treated as being equal in rank and importance from every point of view. 'The writing of a German essay does not bestow any more rights than the assembly of a complicated electrical circuit,' Frister claimed, but he went on to say that the skilled use of a lathe should not exclude learning subtle distinctions in the use of the German language.



Jochen Schweitzer

born in 1942, is the managing member of the board of the Education and Science Union (GEW) and head of the Education Policy Department. From 1969 to 1983 he was a vocational school teacher and university lecturer, and for many years he was involved in the college school experiment in North Rhine-Westphalia.

The political dimension of the integration of general and vocational education — the trade unions' fundamental principle — was the requirement that vocational training too should qualify the individual for equality of opportunity at work and in private life and for social advancement and political participation in the firm, society and the State. Twenty years later these statements are as topical and important as ever.

Principles of educational science

At that time a new theoretical and pedagogical debate on the anachronistic division between general and vocational education had also developed among educational scientists. The most prominent advocate of integration was the Münster educationalist Professor Herwig Blankertz. His tenet, almost undisputed in the professional world at the time, was that in upper secondary education the truth of the humanistic idea in general education — with its reference to the development of individuality in society and for its benefit — should be complemented by comprehensive vocational education. The aim should not in any way be to dispense with general education, but to redefine it. It was impossible according to Blankertz, to set an unequivocal standard of what constituted being educated, and man's politico-social, economic and technical activity should not be dismissed from the requirements of general education with a reference to the pressure to adapt [in vocational training].

These ideas, albeit toned down, influenced the German Education Council, which concluded in 1974 'that in terms of content, general education and vocational training can no longer be segregated'. The Education Ministers of the *Länder* drew initial, modest conclusions from this when reorganizing the sixth form of secondary schools.

The translation of these educational and social views into practice was seriously hampered by resistance from conservative secondary-school teachers and employers, who opposed any upgrading or fundamental reform of vocational training.

Yet, 20 years later — a relatively short time in the history of German education — it cannot be said that these ideas for reform have failed. Some of them have been implemented. The achievement of the goal of integrating vocational and general education, however, is still a long way off. The justification and need for further reform of vocational training, including integration, is even more relevant and urgent today.

New arguments: education in risk-taking society

Since the debate in the early 1970s one dimension in particular has dramatically gained in importance: the control of technical and economic development to ensure that it is compatible with man, society and the environment. With the speed of technical progress, the scale and number of technical disasters and ecological risks have also increased: Seveso, Harrisburg, Bhopal, Challenger, Chernobyl, Sandoz-Basle, Piper Alpha, dying seals, etc. — the list of spectacular events known throughout the world reveals no more than the tip of the iceberg. Innumerable medium-scale regional disasters and the ever-increasing destruction of the natural foundations of human life and of the ecological balance by air, soil and water pollution, the destruction of the biosphere and the rain forests, forest decline and dying animals,

the growing incidence of environmental diseases (e.g. allergies) are a rough indication of the magnitude of the problem: technical and economic activity must be harnessed, controlled and defined by standards appropriate to the environment, society and man.

This need for survival — impressively described by Ulrich Beck in his book *Die Risikogesellschaft* (The Risk-taking Society), which has attracted a great deal of attention — cannot be satisfied by laws and controls alone, which moreover, remain totally inadequate or have yet to be enforced. Education is essential if people are to develop moral, political and professional skills with which to shape their work and society in a democratic and humane way. 'Education is power,' Wilhelm Liebknecht maintained over a hundred years ago. Superficial education leads to barbarity, Adorno warned. The integration of the ecological, social and ethical dimension into the teaching of economics and technical subjects, i.e. the development of *all* aspects of professional and social activity in the education process, is at once the most important and the most difficult educational and political task for an education system of the future.

Laurie Sparham/NETWORK

Professor Wolfgang Klafki, then chairman of the German Society for Educational Science, had something similar to say at a congress of educationalists in 1970: 'One of the main tasks for current work on the theory of education and for practical education in the future is ... the integration of vocational training into a new concept of general education.'

This widely held view in professional circles is justified by many other needs, which cannot all be listed here. The warnings of the limits to growth (Club of Rome) have so far been largely ignored by the public and especially by politicians and leading businessmen. Concepts for making industrial society fit for man and his environment have yet to be implemented.

Technical development generates ever larger technological systems, whose control is by no means assured. The same is true of the concentration and expansion of enterprises or groups which are subject to no effective social or democratic control and are often able to influence political developments more than the electorate or governments. Yet it is society that eventually bears the brunt of misconduct and wrong decisions, it is the individual citizen who foots the bill, whether through prices, taxes or poor health.

It cannot be denied that a general education devoid of any concrete, practical reference to the world of work does not equip people to cope with these developments competently and with commitment. Equally incapable in this respect is vocational (technical, economic) training which ignores the general consequences of and risks inherent to work and merely prepares the individual to meet the specific requirements of a given job.

Other factors to be taken into account in the education process are unemployment, employees' rights and the need for solidarity in the representation of interests and the democratic development of society. Besides these social aspects, the compassionate, ethical and individual dimension of education must be integrated into the vocational training process. This must include matters relating to the identification of a purpose in life through work and leisure activities, the encouragement of creativity and communication, and human dignity and self-realization.

Holistic learning process in theory and practice

An education process of this nature must not only integrate these various dimensions and develop them in theory in vocational learning: it must above all make it possible for them to be experienced in practice, converted into a concrete form and understood. Theoretical and practical learning must be integrated, just as the cognitive and emotional levels must be brought together in a holistic learning process. The best results so far have been achieved in interdisciplinary training and instruction projects, in which learning can, moreover, also be fun. The idea of learning with the 'head, heart and hand' (Pestalozzi) must be further developed for young people and adults and become more widespread.

Organizational implications for schools

Another aspect to be considered in the context of integrating general and vocational education is the organization of schools. Integration will mean the combination of the currently separate secondary school and vocational school, including off-the-job training workshops. The various courses should fit together like modules and be interchangeable. It must always be possible for students to change their minds, and they must be helped with expert advice. This will reduce social selection. However, integrated upper secondary schools should not become mammoth structures, but manageable units specializing in given fields and capable of cooperating with one another. Encouraging those with learning difficulties and integrating handicapped young people must be one of the most important tasks at these joint schools for all young people. The upper secondary school should focus on at least three years of vocational training of the 'dual' or in-school type. At the same time, all young people should have the opportunity to obtain a higher school-leaving certificate, including one that entitles them to go on to a university.

Higher qualification requirements

A higher general qualification of this kind will also meet current or future needs revealed by labour market research. The extensive studies conducted by Prognos AG and the Institute for Labour Market and Vocational Research (IAB) on future labour requirements indicate a clear tendency towards more highly skilled activities and the growing importance of interdisciplinary key skills. Specialized activities will tend to dwindle, while integrated areas of responsibility will increase. The proportion of unskilled employees is likely to be halved by the year 2000, while the demand for university graduates is expected to rise by 58% (compared to 1982).

This predicted trend will, however, require those concerned to demonstrate considerable skills in influencing and guiding those leaving the education system. This is also evident from practical experience. When new technologies are introduced, employees are able to perform tasks forming part of integrated jobs only if they have an appropriately wide range of high-level skills. Otherwise new technologies are similarly incapable of precluding Taylorism. Education and creativity are thus essential if technology is to be structured for man rather than man having to adapt to technology.

Endeavours towards reform in the Federal Republic

In the Federal Republic one of the first attempts at integration has come with the reorganization of occupations in the metal-working, electrical, chemical and commercial sectors. These occupations are based on a new concept of training, which is designed to teach the trainee to plan, undertake and monitor his activities independently, i.e. to teach him the ability to act and organize independently, as an individual. The content of vocational training is thus derived from the job, which can be shaped and changed as a result of technological development. This new concept also requires new forms of learning, abandoning the normal distinction between subjects and tasks assigned to the various places of learning. The achievement of such educational objectives in on-the-job training and in the vocational school thus presupposes the integration of elements of general education into vocational training. However, there is still a long way to go before the trade unions' goal of integration is achieved in all occupations in which training is provided.

Besides various endeavours towards reform in individual *Länder* particular reference must be made to another experiment being conducted in North Rhine-Westphalia with the 'college school' model. It is the most ambitious attempt at reforming upper secondary education, because it integrates all courses at this level and awards all certificates and qualifications — partly in integrated form. The Council of Europe has given this school model a special award. Although these 'college schools', of which there are now 24, do not yet come close to the reform objectives, they do represent a considerable step forward in curricular, organizational and social terms and compare well with other European efforts.

The European dimension

With a view to the completion of the single european marked and increasing European integration (also extending to non-EC countries), the integration of vocational and general education may make a very substantial contribution to the harmonization of the education system in Europe. There should be no levelling down of national and regional cultural traditions; each education system must be open to change and receptive to favourable experience gained in other countries. The present close contact between universities and the mutual recognition of diplomas at European level form the basis for further steps towards the approximation and recognition of vocational qualifications. Current taboos in comparisons of different vocational training systems need to be overcome. Some countries in Europe — e.g. Greece and the Scandinavian countries — have developed models for an integrated education system of this kind. This should be described in greater detail elsewhere. Alternance ('dual') training can draw as much benefit from in-school vocational training as vice versa. European integration should eventually lead not only to multicultural education, but also to the integration of vocational and general education. The preconditions for this are not bad. The 'social dialogue' should accept this challenge and work resolutely towards integration.

A review of the developments towards a vocational training policy for the European Community,

with special reference to the contributions of CEDEFOP

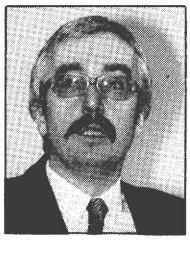
I. Background

□ National constitutions

Education policy in the European Community (EC) is a matter for individual national governments (in some Member States powers in this field have been delegated to regional governments, e.g. the *Länder* governments in the Federal Republic of Germany). Throughout the Community vocational training covers initial and continuing vocational training. Comparative studies carried out by the European Centre for the Development of Vocational Training (CEDEFOP) show that the Member States can be grouped by type of *initial vocational training* as follows:

■ countries where initial vocational training is predominantly company-based with supplementary school-based elements (dual system in the Federal Republic of Germany, Denmark);

■ countries where initial vocational training is largely school-based; the training here is more in the nature of a vocational foundation — training in the specific skills required in working life is usually provided later in companies via company-specific training programmes (e.g. France, Netherlands);



Dr Ernst Piehl
Director of CEDEFOP

■ in the southern Member States (in particular Greece and Portugal) no infrastructure yet exists to support a regular vocational training system; here, vocational training starts after completion of a general education and is company-based; there are generally no control mechanisms.

The countries in the latter two groups have recently shown a preference for training schemes involving two training venues: a combination of company-based and school-based training.

Continuing training can be subdivided in all the Member States into two distinct fields:

■ company in-house training provision to update the skills of the company workforce, with increasing but different degrees of social partner involvement;

■ retraining and continuing training measures run by external bodies operating with government subsidies at local, regional and national level.

□ Community law

Unlike in the case of general education policy, the constitutional provisions of the EC pave the way for developing a Community vocational training policy:

■ *Article 128* of the EC Treaty reads: 'The Council shall, acting on a proposal from the Commission and after consulting the Economic and Social Committee, lay down general principles for implementing a common vocational training policy capable of contributing to the harmonious development both of national economies and of the common market'.

■ Under the terms of *Article 118,* the European Commission is called upon to 'promote close cooperation between Member States in the social field', particularly in matters relating to 'basic and advanced vocational training'; also significant is *Article 117:* 'Member States agree upon the need to promote improved working conditions and an improved standard of living for workers, so as to make possible their harmonization while the improvement is being maintained'.

■ In addition, the provisions relating to the free movement of workers (*Article 48,* EC Treaty), the right of establishment (*Article 52,* EC Treaty), and free supply of services (*Article 59,* EC Treaty) call for policy action in the field of vocational training with a view to realizing the EC freedoms and rights.

■ There is also agreement that no Member State may pursue an education policy which runs counter to realizing the EC freedom rights; in other words, education systems in the Member States have to be 'Community-friendly'. This applies in particular to initial vocational and professional training at both non-academic and academic levels, being especially important in terms of access to training and the recognition of qualifications.

■ For many years now the *legal rulings* of the European Court of Justice have drawn on the abovementioned articles and the 'topping up of powers clause' (Article 235) to oblige the Member States to pursue a 'Community-friendly' education policy. Clear evidence of this is the ruling on the Gravier case handed down by the European Court of Justice on 13 February 1985: under the terms of this ruling, nationals of other EC Member

States qualify for treatment as nationals with regard to higher education. The implications of this ruling are not confined to the higher education sector and also cover the entire field of vocational training.

■ Under the terms of the additional provisions introduced in the *Single European Act* (SEA), in particular Article 118 B, the social partners may conclude agreements on — *inter alia* — continuing training which have at least political force for workers in the EC.

□ Institutions and instruments of a Community-wide vocational training policy

Three institutions and instruments have so far been at the centre of vocational training policy in the EC:

3.1 *'Community legal and statutory documents'* of the Commission and/or the Council, which are increasingly being adopted at the insistence of the European Parliament and/or the Economic and Social Committe of the EC and are based specifically on the provisions of Articles 118 and 128. Examples include the Council Decision laying down general principles for implementing a common vocational training policy (1963), the Guidelines for an action programme in the field of initial vocational training (1971), the communications of the Commission on education in the European Community (1974 and 1988), the Council Decision concerning an action programme for the vocational training of young people and their preparation for adult and working life (1987), and the communication of the Commission on adult training in firms (1987).

3.2 In terms of quantitative impact, the central institutional base for European vocational training policy is formed by the *Community structural Funds,* in particular the European Social Fund (ESF), for which explicit provision was made by the authors of the EC Treaty (Article 123). The financial support forthcoming from this institution for countless initial and continuing training projects has already reached several thousand million ecus, though no qualitative evaluation report exists to date. It is known, however, that substantial subsidies are awarded each year by the ESF and also by the European Regional Development Fund (ERDF) and other financial instruments for training projects, in particular those relating to the integration of young people into working life. The budgets of the two structural Funds are to be doubled by 1993 (to approximately ECU 7 000 million per year).

3.3 The institutional centre for the development of vocational training in the EC is CEDEFOP; CEDEFOP was established by a Decision of the Council of 1975 and has been operating in Berlin since 1976. The some 30 work projects of this EC institution, which has a staff of 60 from all 12 Member States, reflect its three main functions:

■ To serve as a centre for initiating and coordinating research activities, including the dissemination of research findings throughout the Community in all nine Community languages (by means of four periodicals and some 150 other publications per year); this field of activity includes for example, organizing an annual forum for directors of national research and development institutions engaged in the field of vocational training and preparing vocational training scenarios for the years 1993 and 2000.

■ To support the institutions of the Community: the Commission, the European Parliament and the Economic and Social Committee; current examples of this support are the activities to implement the following Decisions of the Council:

- 'Comparability of vocational training qualifications' and the preparatory work for the 'mutual recognition of diplomas and certificates';
- 'Programme of study visits for vocational training specialists' throughout the entire Community.

■ To serve as a platform for all the main parties involved in initial and continuing training: national authorities, trade unions, associations of employers and also international organizations, including some outside the EC, this work includes co-organizing conferences of all formats and attending to visitors to the Centre, both individuals and groups.

Stephan SCHRAPS

II. Milestones on the way to a European vocational training policy

□ The decade of a European declaration of intent and national reform policies

(the mid-1960s to the mid-1970s)

An important foundation stone for a European vocational training policy was the Decision of the Council of 2 April 1963 laying down general principles for implementing a common vocational training policy. Drawing on Article 128 of the EC Treaty, the Decision lays down 10 general principles, some of which are still valid today, which aspire — *inter alia* — to the following lofty goals:

■ every Community citizen should have the opportunity to attain the highest education and training standard required to carry out his or her occupation;

■ jointly developed descriptions of the qualifications required for access to the various training levels are to serve as the basis for approximating the conditions for preparing for formal qualifications with a view to securing mutual recognition of diplomas and other qualifications attesting successful completion of a course of vocational training.

The realities of the subsequent decade scaled down the practical implementation of these lofty oral declarations of intent to setting up an Advisory Committee to the Commission which still today brings together representatives of governments, employers and trade unions to meet twice yearly under the chairmanship of the Commission and draft comments on lengthy documents. The main features of this decade were:

- sustained high economic growth, a shortage of labour in most of the countries of the then Community of Six and no real interest in a training policy, certainly not at European level;

- justified public interest in reform in most Member States: partly the upshot of the student and youth protest movements, the reform effort also covered some major social aspects, e.g. raising girls' and young women's involvement in education and training, narrowing the gap between urban and rural areas, etc.

☐ The decade of institutionalized activity and model programmes at European level

(the mid-1970s to the mid-1980s)

A milestone on the path towards a Community vocational training policy was set with the Council Regulation of February 1975 to establish CEDEFOP (see Council Regulation No 337/75); this, at the time, was one of the few practical upshots of the then only Community Social Action Programme (1974). This programme, which was launched in the aftermath of the so-called oil crisis and with the onset of mass unemployment and structural changes, focused on specific target groups: young people, women and migrant workers. Priority was attached to initial vocational training, in particular to gradually introducing the concept of 'alternance training' (see Council Resolution of 1979), and a large number of corresponding national youth training programmes followed. Basically, this marked Community-wide recognition of using both the school and the company as training venues, rating them where possible as equally valid factors, and also an effort to implement this concept within each national context.

The follow-up at EC level was largely in the form of two consecutive so-called 'transition programmes', concerning the transition from compulsory education to a training course or employment, which were to pool experience from the Member States on this subject and chart out recommendations for halting the downward trend in the situation of young people at this stage in life. This twin mandate was implemented in the form of some 30 model and demonstration projects in the then Community of Nine; these clearly showed up the transnational dimension of the problems, though it was seldom that the recommendations (in particular regarding the need to establish a smoother link between the world of school and the world of work), were subsequently reflected in the standard training schemes in the Member States. Even the sets of model projects carried out in the Member States, financed to 50% by the ESF, could achieve little more than curing symptoms. If only because of the rapid succession of amendments to the guidelines and implementing regulations governing the activities of the promotion instruments, it was not possible to perceive any sustained successes in the effort to get more young people into employment. However, this decade did produce a number of significant directives and guidelines to help secure equal opportunities for women in entering and returning to employment and also to integrate and facilitate the voluntary return of migrant workers.

☐ Consolidation of the institutional bases and complementary longer-term Community action programmes

(the mid-1980s to 1993/95)

Milestones[1] in consolidating the initiatives charted out above were the two Resolutions adopted in June and July 1983 by the first Joint Council of Ministers for Education and Employment:

- 'Council Resolution concerning vocational training policies in the European Community in the 1980s', and the

- 'Council Resolution concerning vocational training measures relating to new information technologies'.

These Resolutions created the institutional basis for the so-called EuroTecNet programme, the first serving as a general basis for several major individual programmes, namely for action programmes on equal opportunities for women in training and employment and also to promote initial and continuing training for migrant workers, the disabled and the long-term unemployed. A broad and predominantly company-based programme of continuing training for adults has made laborious progress since the mid-1980s; it is now just beyond the preparatory stage and could be adopted by the Council in 1989. Reference is also to be made in this programme to the institutional improvements for pursuing the social dialogue introduced since 1985 as a result of the work of the Delors Commission, the real progress made here in the vocational training field having been largely the achievement of the corresponding CEDEFOP priority project and even more so that of the agreements concluded by the social partners themselves.

At the end of 1988, priority importance in the Community's education and training programmes is still attached to initial vocational training,[2] this being clear from the following decisions favouring programmes with a long-term perspective:

- Council Decision on the comparability of vocational training qualifications (July 1985) and the Council Directive on a general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration (December 1988);

- Council Decision concerning an action programme for the vocational training of young people and their preparation for adult and working life (December 1987), which formed the basis for launching the Petra programme;

- two successive and increasingly important action programmes relating to higher education:

  - Erasmus, which is mainly concerned with the financial and organizational aspects of student exchange schemes: 10% of all university students in the EC (approximately 6 million) are to benefit from this programme;

  - Comett, which since 1986 has been supporting transnational cooperation between universities and companies with regard to training in technology; Comett II, to be launched in 1990 with a considerably higher budget, will provide support for some 15 000 students and trainees in training exchange schemes and also approximately 1 000 scholarships to facilitate sabbaticals for university staff and personnel in industry.

In addition, since the mid-1980s, an increasing number of Community programmes have been paving the way for the establishment of a 'European Technology Community'; these also have linkages with the vocational training field, in particular through the two general programmes on research and technology in the EC for the years 1984-87 and 1988-91.

□ Main fields of activity for CEDEFOP to 1992/93[1]

The year 1992, now referred to almost daily, is by no means the 'final destination' for the Community; instead, it will be an important step along the difficult path towards realizing a genuine European Community which extends beyond a single European market to include social and political integration. This broad-based integration process requires that top priority be given to providing initial and continuing training for all. This perspective, together with the gradual implementation of the Single European Act and the objectives set by the main Community institutions for 1992, has guided CEDEFOP towards focusing its activities on the following five main areas:

□ Looking towards a European labour market with effective free movement of labour,

the Centre is to intensify its research and development activities to facilitate the free movement of individuals and upgrade 'occupational profiles' at Community level:

■ Every Community citizen has an individual right of establishment in any Member State and the right to carry out an activity under the conditions applicable in the host country. However, because of the differences in living and working conditions both in legal and social terms and also as regards vocational training from one Member State to another, in practice the possibility of pursuing an occupation is dependent everywhere on a number of criteria. The most difficult criterion here concerns evidence of the theoretical and practical knowledge and skills usually required for diplomas, certificates and other formal qualifications.

■ Preliminary findings are now available from the complex work project on the comparability of vocational training qualifications; by the end of 1988, work which was started at CEDEFOP with national experts many years ago had been completed on six occupational groups covering some 100 individual occupations. In the case of the remaining sectors (plus metalworking), the experts will concentrate their work on occupational groups and profiles which are of particular importance in the light of 1992/93.

■ The information sheets produced in connection with the comparability of vocational training qualifications project, together with the directory of comparable occupation profiles, will serve as the groundwork for introducing a European vocational training 'passport', a proposal which the Commission set out in its 1985 White Book and which is also supported by the Economic and Social Committee and the European Parliament.

■ The work carried out in this priority field for the Centre in the run-up to 1993 will, in any case, help to clarify the situation and make it easier to recognize comparable qualifications; it will assist companies and administrations wishing to recruit staff from other Member States. The comparative tables and agreed definitions are already making it easier to organize exchange schemes, even though training systems still differ considerably from one Member State to another. And, finally, some Member States have already adjusted their training programmes or brought them into line with those of other Member States. And today it seems to be the case that reforms to national systems are only being introduced after a sidelong glance has been cast to the general Community context.

□ Looking towards economic and social cohesion in the Community,

much more effort is to be invested in the next five years in providing real support for structurally disadvantaged regions, regions with failing economies, and also particularly disadvantaged groups of persons such as young people, women, migrant workers and disabled persons with no formal qualifications.

■ In line with the reforms introduced for the structural Funds ESF and ERDF, the Centre's activities will also focus on the following priority categories: structurally disadvantaged regions and rural regions, areas with decaying industries (textiles, coal, shipbuilding), the long-term unemployed, disadvantaged young people, and women wanting to return to work.

■ In terms of the corresponding work projects, special mention should be made of the following: comparative survey of innovative training strategies for regional development; establishment of a database on skill supply and demand in rural areas; design of model programmes to promote crisis-stricken industries and also disadvantaged social groups, e.g. second-generation migrants.

□ Looking towards the gradual creation of a European vocational training area,

the Centre's activities in the fields of information exchange and documentation and communication networks are to be continued; the following are mentioned by way of example:

■ CEDEFOP will continue to provide information which is of interest to people engaged in all aspects of vocational training in the Community; this means not only producing publications tailored to suit the needs of specific groups of readers but also providing access to source information for those engaged in research activities.

■ CEDEFOP will rely to a greater extent in the future on cooperation with its network partners, i.e. the information centres and documentation services in the Member States which have undertaken to report on recent developments at Community level and in other Member States.

■ Another valuable field of activity here is the continuous exchange of information and experience with international organizations and non-EC countries. Particularly beneficial has been the cooperation with the International Labour Organization and its regional centres, but the exchange of information, publications and research reports with East European and Latin American countries and China is also to be intensified.

■ The documentation service will continue to send information on a regular basis to the members of the network, to expand the information and bibliographical part of the journal *Vocational Training*, compile information packages and bibliographies to back up the Community study visit programme and develop and publish documenta-

Barry Lewis/NETWORK

tion/bibliographical material on select topics with the help of the network partners.

■ The terminology work to back up the priority work projects (in particular that on the comparability of vocational training qualifications) is to be intensified, and cooperation with the terminology services of the major EC institutions is to be consolidated and expanded.

■ CEDEFOP will continue to disseminate information and new ideas, provide food for thought and advance the intellectual debate on pressing vocational training issues, this mainly being achieved via its four *periodical publications:*

- the specialized journal *Vocational Training* (three issues per year, nine languages);
- the information service *CEDEFOP flash* (10 issues per year, three to five languages);
- the news release *CEDEFOP news* (five issues per year, three languages);
- the media release *CEDEFOP press* (10 issues per year, three languages).

□ In its endeavour to contribute towards a constant process of renewal in Community vocational training policy,

CEDEFOP wants to do more to encourage transnational exchange schemes and other forms of encounter for researchers with a view to spreading new ideas and experience in a systematic manner. The main work projects in this respect are:

■ The forum for directors of research and development institutes in all 12 Member States, an annual meeting which already dates back to 1985, will continue its activities in the coming four-year period, with invitations to participate being extended to other researchers who can report on new ideas or projects.

■ An expert group of the forum is currently developing vocational training scenarios for the years 1992 and 2000, an extremely difficult undertaking for a Community of 12 Member States with a total population of over 320 million; CEDEFOP is coordinating the preparation of the scenarios.

■ Working in close cooperation with the EC Commission and the national liaison bodies, CEDEFOP has undertaken a number of planning and organizational tasks relating to running and evaluating the EC study visit programme for vocational training experts; each year's activities are planned around individual aspects of vocational training which are regarded as innovative fields in the Member States. The increasingly high calibre of the participating trainers and trainees is affording this programme a rather special new dimension;

■ CEDEFOP will continue to serve as a platform for discussing the most important developments in 'modern training media' (e.g. satellite TV, video discs, interactive video systems) and present analytical accounts of these developments in its periodicals. It is also anticipated that from 1989 on CEDEFOP will award a 'European Prize' for productions which stand out for addressing European aspects of vocational training or for taking these into account in their content.

□ Looking towards the creation of a European area for social dialogue and labour relations,

in the run-up to 1993 CEDEFOP is to intensify its research and support activites with regard to the most important 'actors' in vocational training, in particular continuing training.

■ Unlike the Treaty of Rome, the Single European Act makes specific reference to the social dialogue (Article 118B). This process of social dialogue, already launched at Community level but still a recent phenomenon in some Member States, can serve as a major driving force for economic, social and political integration.

■ The structure and commitment of the Centre's decision-making body has already resulted in the publication of a series of studies examining this question in all 12 Member States and also a synopsis with a Community-wide dimension; in addition, in 1988 the Centre organized a conference on the subject in Brussels as a joint venture with the EC Commission, the Economic and Social Committee and the apex organizations of each of the social partners.

■ During the coming four-year period, CEDEFOP will communicate the results of these activities in a suitable form to the

groups concerned and the interested public in all Member States. It is anticipated that the bodies concerned will react unanimously with a commitment to encourage this dialogue and also extend it in the coming years to cover the sectoral, regional and company dimensions.

■ In an effort to help small and medium enterprises to overcome their size-specific handicaps, e.g. in obtaining information and attracting highly skilled personnel, form 1989 on CEDEFOP is to systematically offer its 'Guidelines on training for entrepreneurs and managers in the SME sector' to institutions which are closely involved with the small business and cooperatives sector. The guidelines are to serve as the basis for developing standards and criteria for designing, implementing and replicating training programmes for the SME sector.

■ In the context of the major EC structural Funds, this priority area of activity is closely linked with another — regional development and vocational training; here, the role of continuing training in regional development must be seen to relate primarily to continuing training in the SME sector.

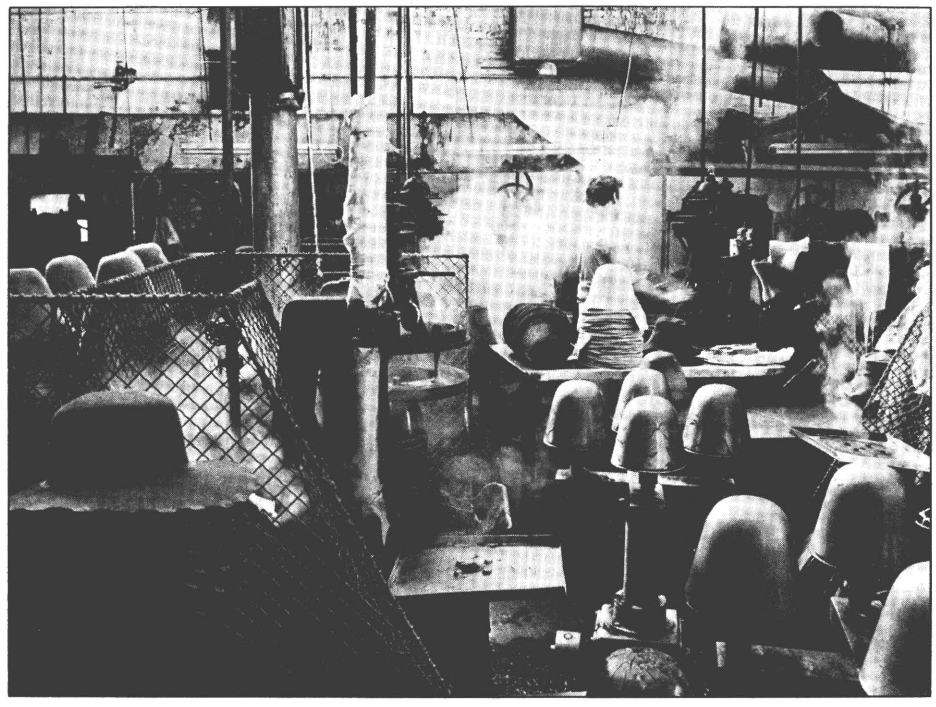
■ With regard to the priority project on training and continuing training of trainers, the decisive factor is that trainers' skill requirements are constantly changing; the main thrust of the Centre's activities, therefore, is to anticipate trends in skill requiremtnes and act accordingly to ensure that trainers are properly equipped to cope with changing circumstances.

■ The Centre's work on training and continuing training of trainers (e.g. foreign language proficiency as an additional skill) primarily focused on constructing standard 'training situations' on the basis of an exchange of views among the actors concerned in order to draw conclusions which can be applied to other training situations.

□ Hypotheses on developments in vocational training in the Community up to the turn of the century

■ General developments

For the EC as a whole, the *assumptions for demographic developments* are somewhat ambivalent: whereas on the one hand the declining birth rate in most Member States is expected to result in hitherto neglected population groups being '(re-)activated' for employment (e.g. women, older workers, migrant workers with a residential entitlement), on the other it is predicted that a surplus of labour will persist throughout the 1990s (not only in the countries with a sustained high birth rate such as Ireland); young people will be most severely affected by the continuing high level of unemployment, and there is already evidence in Western Europe of a trend towards a 'one-third/two-thirds society' of the type already found in the USA.



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■ The rapid **expansion of the services sector** is an undeniable phenomenon which concerns both the 'classical' fields (e.g. public health services) and 'modern' services (e.g. communications).

■ The **spread of modern technologies** throughout all fields of the production and services sectors is raising the standards required in inter-disciplinary social skills such as the ability to learn, to work in a team, creativity, unaided problem-solving and acting on one's own responsibility.

■ The competition on the world market, especially from Japan and the USA, in conjunction with increasing Community integration and fiercer competition on the EC market will accentuate the existing **regional disparities;** the boundaries here will no longer be defined by national frontiers but instead by the contours of geographical, social and ethnic criteria. Accordingly, there will be closer alignment in the material side of living conditions for workers in the main industry and services centres in the Federal Republic of Germany, Italy or Spain, but workers in regions which are remote from the major urban centres will continue to find themselves in a marginal position.

■ The **region** will become increasingly important as the action arena for initial and continuing vocational training. The process of structural change will be most clearly manifest at regional level, and it is towards this level that problem-solving strategies will have to be targetted. The Community structural Funds will become increasingly important as a resource transfer mechanism.

■ The **social dialogue** will take place simultaneously at company, industry, regional, national and Community level and will seek case-specific solutions to what are basically the same main problems. Its products will be not only jointly formulated declarations of intent but also a large number of specific and skeleton collective agreements (in particular on continuing training) concluded between the representatives of both management and labour.

■ Within this overall context, the following bodies will have **statutory powers** in the field of vocational training: regional governments, national governments, the Community institutions and the social partners. Disputes over competence will become more frequent as the issue at stake is seen less as one of finding complementary sectoral solutions than as that of retaining or acquiring political power.

□ Direct implications of '1992' for initial and continuing training

The direct implications of the single European market for vocational training will be relatively minor. Compared with the changes anticipated in the flows in goods, capital and services, there will be *no abrupt changes in national education and training systems.* These systems tend to be built to last and experience has shown that they are slow to reform. Initial vocational training for the traditional skilled craft trades, for example, has a history dating back several centuries. The years leading up to 1992 could at best set in motion but certainly not complete a process of evolution.

■ There will be no **mass migratory flows** within Europe of the magnitude of those of the 1960s and early 1970s, and indeed, the flows of the recent past have now come to a standstill. Italy has become a country of return migration. Greece, Spain and Portugal are today no longer countries of net out-migration; for Spain and Portugal the year 1993 could bring renewed migratory flows once the work permit requirement is lifted. The new Community policy (based on the SEA) has in fact operated counter to mass migrations since 1987 in so far as the structural Funds are making larger resource transfers to ensure that people do not have to migrate to find employment. Immigration from third countries is still subject to strict controls.

■ A different type of mobility will become increasingly important in the Community of the future: **exchange flows of persons with particular skills.** This will not amount to a mass migration but will be more a matter of an intra-industry mobility which will mainly concern large companies, be confined to specific occupational groups, skills and regions, and to some extent will be arranged on a temporary basis. The groups concerned will be primarily managerial personnel, technical and engineering personnel, persons in the liberal professions, in particular teachers and trainers, and also scientists and skilled workers. Exchange schemes are already commonplace in some border regions, e.g. in the Saar-Lorraine-Luxembourg triangle. In the medium term, persons who are successful in business will tend to have two places of residence, a trend which is already apparent in geographically large countries, e.g. the United States.

■ Alongside this mobility in the employment system there will be greater **mobility in the education and vocational training systems:** the result of exchange schemes, jointly designed courses of study and training, transnational training projects, and European education and training institutions (see above).

Differences in entrance requirements for universities and other institutes of higher education and also in regulations governing the award of study grants and training allowances will result in a larger fraction of 'non-nationals' among the student and trainee population in some Member States (most of these 'non-nationals' are to be treated as 'nationals' from 1993 on). The exchange programmes Erasmus and Comett will have an ever stronger impact, especially as their scope is to be expanded and their quality improved.

□ Indirect implications of '1992' for initial and continuing vocational training

■ More important than the direct implications of the single European market will be its indirect implications. The *impact of the single market will be more one of accelerating than initiating* certain developments which are already in-built in the employment, education and vocational training systems. It will function as a process catalyst.

■ The **pressure to train and be trained,** already keenly felt in the wake of technological advances and world market factors, will become stronger in the run-up to 1993 and thereafter. It will apply to all levels of skills and training. Training and study curricula will be expanded to include *Community-related issues and other Community languages.* The additional ability of being able to speak and write in — or at least read and understand — two or more languages will be much more significant in a deliberately multicultural Europe, with its linguistic diversity and rich history, than in other continents. And this trend will not be stopped by the spread of 'translation computers' as these are not able to replace interpersonal communication.

■ As all these additional and 'new' skills cannot be created merely by reforming the initial education and training systems, where reforms have in any case traditionally been slow to take shape, *continuing training* will become even more important as a determinant of employment prospects. Moreover, already acquired skills and knowledge are in constant need of updating. Annual courses of continuing training will become standard practice, especially in larger companies and administrations. The 1990s will go down in European history as the decade of continuing training.

■ Acquiring occupational and social skills will no longer be a process which takes place in a certain country. Moreover, skills acquired in one country will increasingly be used to earn a livelihood in others. Vocational training is becoming a genuinely *transnational process,* and the qualifications obtained a convertible currency.

■ We will find ourselves facing a rapidly expanding *European continuing training market* where development prospects will depend on the effective use of modern information technologies and education media. The main suppliers competing on this no-frontiers education market will be major media companies and private and paranational organizations. At the same time, there will be turbulent developments in the fields of education technology and media (especially with the advent of Community-wide satellite TV), which will have a strong influence on the market and also question the value of conventional public-law control mechanisms. For these and other political reasons, the *European political community* based on a parliamentary constitution and able to guarantee civil rights and democratic controls will become a reality by the turn of the century.

Footnotes

1 Important milestones for Community policy as a whole were the conclusions of the 1985 Milan Summit which provided clear orientations for education and training policy within the framework of a 'Citizens' Europe'.

2 A notable exception is the Action Programme to combat long-term unemployment adopted in 1987, which concerns both young people and adults.

3 Obtainable in all nine Community languages from CEDEFOP, Bundesallee 22, D-1000 Berlin 15.

By:

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CEDEFOP's documentary information network was asked to provide material illustrating the theme of the Bulletin, and in particular to provide bibliographical references.

Harrison, J.; Mc Leish, H.: **Young people in transition - The local investment**
CEDEFOP (European Centre for the Development of Vocational Training) Luxembourg: Office for Official Publications of the European Communities, 1988, 183 pp. Languages: ES, GR, DE, EN, IT, NL
ISBN 92-825-6877-6
Youth. Transition from school to work. Training needs. Training supply. Local planning. Communities. Training initiatives. Vocational guidance. Job placement. Organizations. Case studies. Manuals. EEC countries.
This handbook is the result of the cooperation, ideas and experiences of a working group of people active in integrating young people into working life at a local level, which was convened by CEDEFOP. They helped analyse and describe their own local activities so that this guide could be produced for the purpose of: recognizing and clarifying the common problems of transition, planning of objectives and setting the limits of objectives, providing examples of good practice, providing a route to further advice and help, providing a means by which expert and professional people in different agencies and disciplines can come together to provide services for young people in transition and to encourage bilateral or multilateral cooperation. The guide gives constructive advice to anyone who wishes to provide effective training for young people or those seeking to improve or extend an existing local system. It presents a range of examples and models derived from the initiatives reflected in this book within the context of a planned approach which can be adapted to their own needs by planners.

Ketter, P. M.; Petzold, H. J.; Schegel, W.: **Training for everyone: a guide to the planning of innovative training and employment projects for unemployed young people in the European Community**
CEDEFOP (European Centre for the Development of Vocational Training) Luxembourg: Office for Official Publications of the European Communities, 1987, 152 pp. Languages: EN, ES, DE, GR, IT, NL, DA
ISBN 92-825-6877-6
Youth. Youth unemployment. Marginalization. Communities. Training programmes. Employment programme. Employment schemes. Training initiatives. Skill development. Innovations. Entry into working life. Pilot projects. Manuals. EEC countries.
The guide which is foreseen as a planning, organization and implementation guide for decision-makers and project organizers, is the outcome of a CEDEFOP project, 'Training of young people in innovative local employment initiatives', which set out to establish whether and to what extent innovative training and employment initiatives can help disadvantaged young people. Part A gives advice on the conceptual development and planning of such initiatives. Part B describes and analyses existing innovative approaches, how they are moulded by labour market trends, the extent of marginalization and government measures, how they are structured and to what extent they teach skills and integrate young people into employment. Part C sets out guidelines on the planning and implementation of innovative training and employment projects, suggesting ways they can help create employment, stipulating certain qualifications for the technical staff of such projects and elaborating on the necessary political, advisory and financial support they require.

Vocational Education and Training and Employment prospects of Young People in the European Community. Report on the CEDEFOP Conference, Berlin, 22 and 23 September 1986

CEDEFOP (European Centre for the Development of Vocational Training), Berlin: CEDEFOP Flash 8/86, 17 pp. Languages: EN, FR, DE

Youth employment. Youth. Education and training. Upper secondary education. Educational development. Alternating training. Part-time courses. Marginalization. Innovations. Pilot projects. EEC countries. EC Commission. Conference reports.

The conference sought to review the progress of EC Commission and CEDEFOP progammes and projects in the field of education, training and vocational preparation of young people. This issue of CEDEFOP Flash reports on the subjects discussed by the working groups:

- recent developments in mainstream vocational training (full-time schooling);
- alternance training and part-time training schemes for young people (company and school) and related developments;
- new training and employment schemes for marginalized young people, i.e. drop-outs, long-term unemployment, etc.

First European Congress on Continuing Education and Training, Berlin, 9 and 10 October 1986. Continuing Education and Training in Europe — Opportunities for Innovation and Employment

Berlin, distributed by Spectrum Communications, 1988, 366 pp.

Continuing vocational training. Conference reports. EEC countries. Innovation. Human resources. Educational deveplopment. Labour mobility. Employment policy. Pilot projects. Training systems. Enterprises. Adult education. Tertiary sector. Long-term unemployment. Sweden.

This first Congress, held in Berlin on 9 and 10 October 1986, was organized by the City of Berlin Senate for the Economy and Employment in conjunction with the Federal Institute for Vocational Training (BIBB), the European Centre for the Development of Vocational Training (CEDEFOP) and the European Business School. The publication contains papers read to the congress and reports by workshop leaders. The main subjects discussed during the two-day congress were: innovation in vocational education and training in Europe; continuing education and training: a growing field in Europe; training and the employment market, new prospects for employment, unemployment and equal opportunities; comparison of the current training situation in certain European Community countries: France, Ireland, Italy, Germany; European Community programmes; mobility in Europe; and a presentation of five projects in the European Community.

In conclusion, continuing can and must be the key to the development of human resources, not only in each workplace, region and country, but also in Europe as a whole.

Fellner, M.: **Programme de travail de la Commission visant à promouvoir l'innovation dans l'enseignement secondaire dans la Communauté européenne. Communication de la Commission**

Luxembourg: Office des publications officielles des Communautés européennes, COM(88) 545 final du 14. 10. 1988 [voir aussi COM(88) 280 final], 15 p. Langues: ES, DA, DE, GR, EN, FR, IT, NL, PT.

EC Commission. Educational innovations. Upper secondary education. Teacher training. Educational policy. Equal opportunities. Illiteracy.

Le Conseil et les ministres de l'Éducation ont invité la Commission à présenter des propositions pour une nouvelle étape de coopération concrète au niveau communautaire. Cette coopération devrait en particulier aider les États membres à renforcer leur capacité d'innovation dans l'enseignement secondaire, avec un accent particulier sur un certain nombre de thèmes prioritaires se dégageant du programme précédent, et être articulée sur l'action communautaire connexe en matière de formation des enseignants, de prévention de l'échec scolaire et de l'illettrisme, et d'égalisation des chances pour les filles dans l'enseignement secondaire.

Le présent programme de travail sera mis en œuvre par la Commission, en coopération avec les États membres pendant les quatre ans de la période 1989-1992.

(Extrait.)

Commission work programme relating to the promotion of innovation in secondary education in the European Community. Communication from the Commission

Luxembourg: Office for Official Publications of the European Communities COM (88) 545 final, 14. 10. 1988 (see also COM(88) 280 final), 15 pp.

Languages: EN, FR, DE, ES, IT, NL, DA, GR, PT

ISBN 92-77-40644-5

EC-Commission. Educational innovations. Upper secondary education. Teacher training. Educational policy. Equal opportunities. Illiteracy.

The Council and Ministers of Education asked the Commission to put forward proposals for a new stage of concrete cooperation at Community level. One of the aims should be to help Member States step up their capacity for innovation in secondary education, the emphasis being on a number of priority areas not included in the previous programme, to be linked with Community action in associated fields: teacher training, the prevention of academic failure and illiteracy and equal opportunities for girls in secondary education.

This work programme is to be implemented by the Commission in cooperation with the Member States over a four-year period, 1989-92.

Final summary report on the second European Community action programme (1982-87) concerning the transition of young people from education to adult and working life
Commission of the European Communities. Luxembourg: Office for Official Publications of the European Communities, 1987, COM(87) 705 final, 104 pp. Languages: EN, FR, DE, ES, IT, NL, DA, GR, PT
ISBN 92-77-31920-8 (FR)

European communities; Transition from school to working life; Pilot projects; School-enterprise relationship; Curriculum development; Vocational guidance; Equal opportunities; Teacher training; Local planning; Reports.
The report provides a summary overview of the main outcomes of the second transition programme, putting into perspective the changing social and economic context and challenges of the transition process, and illustrating the responses and approaches developed by the pilot projects, grouped into the programme's four main theme areas (i.e. closer links between schools and the economic world, improving educational and vocational guidance, combating school failure and disadvantage and preparing teachers for new tasks and roles). The main policy messages derived from the projects' experience in the form of recommendations and priorities are included.

Comett — The training needs of staff in the Community's higher education sector engaged in cooperation with industry
(Final report prepared by European Research Associated), Commission of the European Communities.
Luxembourg: Office for Official Publications of the European Communities, 1988, 422 pp + 18 appendices. Bibliography. Language: EN
ISBN 92-825-8763-0
Training needs analysis. Teaching personnel. Skill analysis. Higher education. School enterprise relationship. Skill development. Teaching methods. Institutional framework. Belgium. France. Ireland. United Kingdom. EEC Countries. USA. Sweden.
This report takes a close look at four European Community countries — Belgium, France, Ireland and the United Kingdom — and examines the other Member States, the United States and Sweden more concisely. The report is divided into five sections covering the following subjects:
(1) Research methodology;
(2) Analysis of developments in cooperation between higher education and industry;
(3) Analysis of the institutional framework and personnel (qualifications, experience and functions) involved in cooperation between higher education and industry;
(4) Analysis of the teaching body's future needs with a view to securing positive cooperation with industry;
(5) Proposed methods for the future training of staff so that they will be sufficiently qualified to promote better cooperation between higher education and industry.

People and technology: investing in training for Europe's future
A joint EEC and MSC conference report. Edited by Janet Smith. Maastricht (NL): Presses universitaires européennes, EuroTecNet, Series No 1 (Vol. 1), Series No 2 (Vol. 2), 1987, Vol. 1: 76 pp., Vol. 2: 95 pp. Languages: EN, FR
ISBN 90-70776-20-0 (Vol. 1)
ISBN 90-70776-21-9 (Vol. 2)
Technological change. Human resources. Training policy. Employment policy. Forecasting. Employment creation. Access to employment. Occupational qualification. Training supply. Conference reports. EEC countries.
Volume 1 contains a report of this conference which took place in London, 25 to 27 November 1986, which provided the opportunity to underline the importance of human resources as a key factor in internal labour markets as well as in the economic and social development of the Community. Volume 2 contains the main speeches made at the conference by participants responsible for decision-making on training issues in the Member States and the European Community. The papers are published in the language in which they were given. The following is a list of their titles: technological change — the future of training and work; education, training and the evolution of technology in industry; technological change — job creation and innovations in the world of work; training and new technologies; new technology training and access to jobs, policies for employment; information technology and investment in training; new technology corporate investment and job creation; and how new technologies should be developed.

Qualifications 2000 — Conference in Vienna, 18 to 20 May 1988.
European Institute for Vocational Training, Paris. Conference proceedings, 1988, no page numbering. Languages: FR, DE, EN
Conference reports. Training needs. Vocational training. In-plant training. Enterprises. Non-traditional occupations. Skill development. Training policy. Pilot projects. Training centres. EEC countries. Austria. Belgium. France. Federal Republik of Germany. Italy. United Kingdom.
A compilation of the main papers given at the Vienna Conference on 18 to 20 May 1988.
The main issue discussed was 'How countries (enterprises, the authorities and training agencies) are preparing for qualifications for tomorrow's jobs and careers'.

The FAST II programme (1984-87). European Future. Prospects and technology. Summaries of research projects, Vol. 1 and 2

Directorate-General for Science, Research and Development, Commission of the European Communities. Brussels: The FAST programme, Commission of the EC (DG XII/H/2), 1987, Vol. 1: 240 pp., Vol. 2: 224 pp. Languages: EN, FR

European Communities; Research programmes; Science and technology; Employment; Technological change; Economic development; Social change; Communications industry; Food industry; Natural resources.

The FAST (Forecasting and assessment in the field of science and technology) II programme concentrates its research work on five fields vital to economic growth and social development. They are: changes in the relationship between technology, work and employment; services activities and new technologies; the communication function — a strategic issue for Europe; the future of the food system; integrated development of renewable natural resources. These two volumes contain summaries of each research project being carried out under the five themes above, including a description of the project (methodology, work in progress, results and recommendations to date) and reference information on those responsible for the project.

Étudiants — Universités — Entreprises: L'Europe de demain

Paris: Le Monde Campus, 3. 3. 1988, 29. pp. Language: FR

ISSN 0395-2037

Conference reports. Education and training. Pilot projects. Youth. EC Commission. Student exchange. School enterprise relationship. Attitude. EEC countries. Surveys. Technological change. Science and technology. Research. International universities. Student mobility.

University staff, students, employers and politicans met in the Sorbonne in Paris on 2 March 1988 for a colloquium on 'Students — Universities — Undertakings: The Europe of 'Tomorrow'. This venture, initiated by *Le Monde,* in conjunction with other leading newspapers and the Commission of the European Communities, was designed to present a preliminary review of two Community programmes: Comett (exchange between the universities and industry) and Erasmus (international mobility of university students). The account of the review also touches upon other Community programmes: Esprit (information technology), RACE (telecommunications), Brite (industrial technologies), Euram (new materials), FAST (relations between technology, employment and work), Sprint (innovation in small firms), EuroTecNet (pilot schemes in the field of new technology), Delta (research and development on multimedia learning systems) and YES (youth exchange scheme for Europe). Finally, the publication sets out the findings of a survey among a sample of 2 796 persons aged 15 to 34 in Germany, Belgium, Spain, France, Italy, the UK and the Netherlands. The report shows that young people are generally in favour of a Europe without frontiers.

NB the publication contains many useful addresses.

Training and retraining — implications of technological change

ILO (International Labour Office): Fourth European Regional Conference, Geneva, September 1987. Geneva: ILO, 1987, 65 pp. Languages: FR, EN

ISBN 92-2-105993-6

ISSN 0255-352 X

Technological change; Work organizations; Skill development; Educational systems; Post compulsory education; Training needs; Retraining; In-plant training; Training centres; Access to education; Apprenticeship; Industry; Services; Conference reports; Europe.

Before discussing the adjustment of education and training systems, the present report will, in Chapter I, briefly describe the major types of technological change and some of the more frequently used applications of new technology. The description will be followed by an analysis of their impact on job content and work organization in industry and services. Chapter II will then analyse the ensuing changes in occupational structure and in the skills, knowledge and attitudes that workers will need at various levels of responsibility in order to develop, operate and maintain new technologies and capital equipment. The bulk of the report (Chapters III, IV, and V) will examine how European education and training systems and institutions, including enterprise-based training, are fostering technological innovation and adapting the present and future workforce to the demands and opportunities of technological change (extract).

B

Selective bibliography

Centre d'Information et d'Education Populaire du Mouvement Ouvrier Chrétien (CIEP)
AID: Actions Intégrées de Développement. Des initiatives régionales et locales d'insertion sociale et professionnelle de jeunes sans emploi de 18 à 25 ans
Brussels, CIEP, 1986, 58 pp., rue de la Loi 103, B-1040 Brussels.
Entry into working life. Young people 18 to 25 years old. Marginalization. Continuing education. Région bruxelloise. Région wallonne. Belgium.

In this information booklet, CIEP describes various schemes for the training and the introduction to working life of young people in excluded or marginalized groups for which the French-speaking Christian Workers' Movement has taken responsibility. Under these schemes, a contract is signed between representatives of the working world and representatives of education and training. The educational approach, applied closely links work, technical teaching and general education, each imparted by separate but linked trainers with experience in the teaching of adults. The booklet also describes 10 regional vocational integration projects coordinated by the Christian Workers' Movement. The role of the Movement in this context is to create a bridge between general education and vocational training, for which young people are prepared during in-company placements.

Dewaele, A.:
Schakelopleidingen voor laaggeschoolde werkzoekenden.
Een kritische analyse van het schakelconcept, op basis van een evaluatie van de schakelopleidingen in Limburg
Leuven, Hoger Instituut voor de Arbeid (HIVA), Katholieke Universiteit Leuven (KUL), 1988, 107 pp, E. Van Evenstraat 2e, B-3000 Leuven.
Training evaluation. Training programmes. Educational disadvantage. Long-term unemployment. Women. Migrant workers. Coal miners. Training policy. Proposals. Région flamande. Belgium.

On behalf of the European Community and the Minister for Employment, Education and Local Authorities of the Flemish Community a critical study was made of 'linking' training courses for poorly educated job-seekers to determine their potential and limits.
This critical analysis of the linking concept, based on an evaluation of these training courses in Limburg, involved a number of premises:
- the courses are considered in terms of their functionality for the labour market;
- this linking training formula is examined in terms of its relevance to the problems facing poorly educated jobseekers in the region;
- although the members of the target group have certain features in common, in particular poor education and long-term unemployment, heterogeneity within the group is considered: the group includes long-term unemployed women, migrants and redundant mineworkers.

Prior to discussion of all these aspects, the reader who may be less familiar with this form of training is given an indication of the emergence, development and specific features of linking training courses.

Leirman, W.:
De ontwikkelingen in de volwassenenedukatie gesitueerd in een internationale kontekst
Leuven, Bond van Vormings- en Ontwikkelingsorganisaties (BVVO), 3, 1987, pp. 3-10, Tiensevest 142, B-3000 Leuven.
Continuing education. Institutional framework. Educational philosophy. Conference reports. Canada. Région flamande. Région bruxelloise. Belgium.
The author begins by outlining the evolution of the concept of continuing education since 1955-60, making a distinction between the socio-economic variant, with concepts such as 'education' and 'occupationally-oriented', and the sociocultural variant, with the concepts of participation, equalization and globalization. Throughout his paper he also calls for the integration and removal of the barriers between the two poles at institutional, methodological, social and substantive level.
He goes on to consider the similarity between the situation in Flanders and in the province of British Columbia, Western Canada. After explaining the role of adult education in British Columbia and its evolution from 1970 to 1985, he presents its (school) learning pyramid and shows how an integrated form of education can be provided.
In the third part of his paper, the author discusses future policy, in the light of the guidelines and practical proposals on integrated education policy put forward at the Malle conference in 1979.

Panciera S.; Di Loreto G.; Ernotte F. and co-workers:
Feasibility study on the creation of an Italian centre for training in new technologies and for the promotion of employment in the Brussels region
Brussels, Centro di Azione Sociale Italiano Università Operaia (CASA UO). 1986, 78 pp., rue du Canal 13, B-1000 Brussels.
Training centres. Microelectronics. Microcomputers. Training needs. Manpower needs. Employment creation. Youth. Marginalization. Région bruxelloise. Belgium.
The report sets out the findings of a sociological survey conducted with a view to setting up a new technology training centre in the Brussels region for unemployed young people at risk of exclusion and marginalization. Based on the model of ITECs in Britain and CIRFTEN in Lille, the project is designed to meet the changing needs of employers for electronic and micro-computer maintenance.
The report analyses these needs and the target group, describing plans for the training programme and the reaction and cooperation found among the institutional agencies concerned with an enterprise of this kind.
The role of the future training centre will be to reinforce general education and offer technical skills before placements in the companies concerned.

Description of two projects in the Flemish Community

Schakelopleidingen

Rijksdienst voor Arbeidsvoorziening — Directie Beroepsopleiding, Keizerslaan 7, B-1000 Brussels. The aim of 'linking' courses is to promote the understanding, skills and motivation of poorly educated job-seekers so that they may go on to various vocational training courses and/or jobs. The training package consists of technical, general and social education, methodologically based on the integration of the substance of each type of education. There are 27 linking projects in the Flemish community (at year-end 1988).

Het bootproject.

Buurtwerk 't Lampke, Cité Delvaux 1, B-3000 Leuven. The boat project — the restoration and fitting out of a boat — is a cooperative initiative designed to offer poorly educated unemployed young people from a socially deprived neighbourhood a way out of their hopeless situation by providing them with general education and training.
After an investigation into their needs and the world in which they live, the following general objectives were set:
1. To increase their motivation to learn and to work.
2. To increase their understanding and skills with a view to
(a) ensuring opportunities for referral by preparing the young people concerned for possible updating training and retraining (e.g. referral to other linking projects and training organized by the National Employment Service) or for a job;
(b) enabling them to live independently and stand up for themselves socially;
(c) keeping existing skills up to date.
3. To improve and maintain a number of necessary attitudes towards work.
4. To provide the young people with an appropriate way to spend their time within the framework of possible employment.

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General adult education. Betænkning om prøveforberedende enkeltfagsundervisning pa grundlæggende niveau afgivet af et udvalg nedsat af Undervisningsministeren juli 1985. (Betænkning No 1146). Copenhagen, 1988, 93 pp.
ISBN 87-503-7459-1
Adult learning. General Education. Modular training. Proposals. Denmark.
In 1985, as part of the follow-up to the Lower House's parliamentary resolution concerning a 10-point programme for adult and general education from 1984, the Minister for Education appointed a committee on basic single-subject teaching in preparation for examinations. The committee states in its report that the Community has a duty to educate not only children and young people, but also adults who have had only brief schooling. The report contains proposals for a new system of general adult education to replace adult education in preparation for examinations primary and lower secondary school level. The committee points out that general adult education must really provide adults with the opportunity to extend and update their general knowledge and skills so as to enable them to achieve a level of competence parallel to that achieved within the primary school system. It also stressed that alongside purely vocational education there is also a need for education providing a stimulus for personal development and social awareness.

Draft Law on vocational training. Parliamentary bill No L 38 tabled on 6 October 1988 by the Ministers for Education and Research.
Vocational training. Technical training. Planning of training. Training policy. Bills. Denmark.
This bill proposes reforms in the field of vocational training, combining apprentice and initial training courses and also the basic technician training courses under common rules embodied in a Law on vocational training. The underlying principle of the bill is that all youth training courses must be sandwich courses linking school-based and on-the-job training. The student must be able to choose between commencing training at school or in a firm on the basis of a training agreement. On-the-job phases of training must not only comprise job-related training, but must also reinforce, support and supplement theoretical and practical school-based learning. Finally, the bill also proposes the abolition of restrictions on admission.

Draft Law on amendment of the Law on job opportunities for the unemployed, the Law on job placement and unemployment insurance, etc., and of the Law on a labour market training fund. Parliamentary bill No L 65 presented by the Minister for Labour on 13 October 1988.

Long-term unemployment. Employment opportunities. Education and training. Entrepreneurs. Bills. Denmark.

In this bill the Minister for Labour proposes an intensification of efforts to combat long-term unemployment. The campaign, costing a total of DKR 5 200 million, is to be financed with the aid of an employer's payment for the first day of unemployment and an increase in the wage-earner's contribution to the labour market training fund. According to the bill, unemployed persons will, for example, have an opportunity to receive a business start-up grant after five months of unemployment. Jobless persons who have not received education leading to a qualification shall moreover be entitled to 2 1/2 years of training prior to their first job offer. Upon completion of their first job, all unemployment persons shall be entitled to two years of training.

Frederiksen, Pia; Lassen, Morten; Lundgreen, Helle: **Slutrapport fra projekt om evaluering af specialarbejderuddannelsen**
(ATA projektet. Rapport No 11). Aalborg, 1987, 59 pp. ISBN 87-88706-28-1
Semi-skilled workers. Training evaluation. Research reports. Denmark.

In 1985 the Ministry of Labour launched a major evaluation of training schemes for semi-skilled workers. This project was conducted by researchers linked to the Aalborg University Centre. The report concludes the evaluation and contains a summary of the other four sub-reports in the project. It finally outlines the authors' own proposals for the improvement of training; they believe that the image of semi-skilled worker training must be shifted away from highly job-specific and firm-orientated courses, towards other legitimate interests at the level of the labour market and in the Community at large. Regarding training itself, the conclusion is that the aim must be to set up longer-term training courses for unskilled adults, providing the same degree and standards of formal qualification as those held by skilled workers.

Høier, Peter; Kjaersgaard, Chr.: **Efteruddannelser og industriel omstilling, oppbrudet i erhvervsuddannelserne**
(Rapportserien No 2) Institut for miljø, teknologi og samfund. Roskilde Universitetscenter. Roskilde, 1987, 322 pp. + bilag.
ISBN 87-87893-47-9
Continuing vocational training. Educational reform. Job requirements. Occupational mobility. Regional labour market. Research reports. Denmark.

The new Law continuing training (Law 271) has enabled the implementation of comprehensive changes in the use of vocational training. The authors observe that the trend is towards a training system providing narrow qualifications increasing being constructed around a highly ramified continuing training system, adapted to the needs of the labour market. This trend is reinforced by increasing use of short-term, individual and often highly specialized continuing training courses.

According to the authors, the adoption of the Law on continuing training is the expression of a fundamental break with training policy as applied to date, with the labour market partners making the arrangements jointly within the vocational training sphere. Now the sole basis for planning has become industry's direct declaration of its needs so that this section of the continuing training system is exclusively regulated by market fluctuations. In the text, the authors take a closer look at the industrial and labour market background to skill update training, putting into perspective the implications of attempts to specialize the training system.

Law No 232 of 22 April 1987 on continuing technician training, etc.

Technical education. Post-secondary education. Acts. Denmark.

The Law on continuing technician training contains provisions on a special management structure intended to ensure effective advisory activity, flexibility and speed of readjustement for training schemes. A technicians' advisory committee is to be appointed to put forward recommendations to the minister on subjects of a general nature. The Law is based on decentralization of decision-making processes. Technical schools are to be responsible for training, but are to be able to delegate all or part of teaching to private or public institutions. The Law finally contains provisions concerning supplementary courses (TIF — preliminary training courses for technicians and engineers for those seeking training who have no direct access to courses. It will be possible for the main training and the TIF courses to be offered as part-time training schemes, thus enabling employees to participate in continuing and further training schemes.

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Palaiokrassas, S.: **Diasyndesi ekpaidefais kai apascholisis se mia eleftheri koinonia**
(Linking education and employment in a free society)
Elefthero Politiko Ergastiri, Athens, 1985, pp. 207-212.
L. Alexandras 207, GR 115 23 Athens, Greece.
(Paper read at a conference in Athens on 24 to 27 January 1985 on 'Education and contemporary society'.)
Education. Employment. Unemployment. Education and training. Further education. Educational policy. Employment policy. Greece.

Article on the relations between employment and education in contemporary society. The problem of the unemployment of young diploma-holders is viewed in perspective and solutions such as additional education are proposed, together with a policy on education and employment.

Papandropoulos, A.: **O rolos tis technologias stin paideia kai tin apascholisi i pos proetoimazetai to etos 2000**
(The role of technology in education and employment, or how we are preparing for the year 2000)
Elefthero Politico Ergastiri. Athens 1985, pp. 213-218.
L. Alexandras 207, GR 115 23 Athens, Greece.
(Paper given at a conference in Athens on 24 to 27 January 1985, on 'Education and contemporary society'.)
Technology. Education. Employment. Robots. Computer science. Computer applications. Economy. Production. Greece.

Article on the role of technology in education and employment in the run-up to the year 2000. The replacement of humans by machines is predicted, as well as the major role played by the computer in the economy and the field of production.

Papatheodos, M.: To sistema tis technikis-epangelmatikis ekpaidefsis stin Ellada: Simerini katastasi dai prooptikes sto: **I Ellada pros to 2000: Politiki kai koinonia, oikonomia, exoterikes scheseis**
(The technical vocational education system in Greece.The situation today and prospects. In: **Greece towards 2000: Politics and Society, Economy, Foreign Relations.)**
Ekdoseis Papazisi AEBE/Friedrich Ebert Stiftung.
ISBN 960-02-0765-8
Technical education. Vocational training. Economy. Employment. Secondary education. Students. Greece.

Article on the technical and vocational education system in Greece, analysing the country's economy over the past 40 years and relating it to employment and the educational system, as well as the country's transitions into the age of technology.

Stavrou, S.: I ekpaidefai atin Ellada to etos 2000 sto: **I Ellada pros to 2000: Politiki kai koinonia, oikonomia, exoterikes scheseis**
(Education in Greece in the year 2000, in: **Greece towards 2000: Politics and Society, Economy, Foreign Relations**
Ekdoseis Papazisi AEBE/Friedrich Ebert Stiftung.
ISBN 960-02-0765-8
Education. Economy. Student population. Secondary education. Post secondary education. Technical education. Vocational training. Employment. Further training. Greece.

The author of the article conducts a searching analysis of the infrastructure of Greek education and proposes a solution for improving its quality.

E

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Bosch, Francisco; Diaz, Javier: **La educación en España**
Barcelona, Ed. Ariel SA, 1988, 239 pp.
ISBN 84-344-1077-X
Training-employment relationship. Public education. Private education. Local government. Educational policy. Educational financing. Cost of education. Educational supply. Educational systems. Educational opportunities. Primary education. Secondary education. Higher education. Vocational training. Pre-school education. Teaching personnel. Special education. Curriculum. Distance study. Evaluation. Labour market. Educational facilities. Spain.
A description of the education system in Spain from a fundamentally economic viewpoint. An introductory chapter is followed by two chapters which chart out the framework within which education is developing in Spain: legal foundations, objectives, system organization, distribution of powers between the central and autonomous regional governments, multilingualism, structures by level and teaching mode. The following chapters focus on specifically economic aspects: individual demand for education — with the variables influencing such demand; the educational provision classified by level and autonomous community; costs of education — total spending, average spending and resource allocation. The last three chapters address, respectively, educational content and curriculum organization; the teaching corps — the corresponding labour market and its impact on teaching quality; and relations between the labour market and the education system.

Proyecto para la reforma de la Enseñanza, Educación infantil, Primaria, Secundaria y Profesional, propuesta para debate
Madrid. Edita Ministerio de Educación y Ciencia. 1987, 40 pp.
Educational reform. Educational systems. Right to education. Training legislation. Legislation. Educational levels. Teacher training. Access to education. Educational administration. Educational objectives. Education and training. Compulsory education. School leaving. Training-employment relationship. Secondary education. Spain.
A project for educational reform in Spain resulting from the need, created by the constitution, to regard education as a fundamental right of all Spaniards. It proceeds from a clear acknowledgement that the measures introduced to date have not all been as successful as was originally claimed and concludes that there is a need to offer educational opportunities in line with our Community context and the requirements of the labour market. The reform applies as much to compulsory education as to secondary and vocational education, thereby highlighting the need to overcome the problems at the transition phase between the end of compulsory schooling and the minimum age for entering the labour market and also to solve the budgetary problems in terms of the corresponding investments made in this field in other countries — all this being seen in conjunction with the shortage of teaching personnel. It is argued that this reform could amply cover the needs of compulsory education and also pave the way for adequate and high-quality secondary, vocational and higher education.

Diaz Malledo, Javier:
La Educación y el Mercado de Trabajo
Madrid. Ed. Instituto de Estudios Económicos, 1987, 39 pp.
ISBN 84-85719-66-2
Entry into working life. Labour market. Youth employment. Initial employment. Unemployment. Underemployment. Graduates. Manual workers. Primary education. Higher education. Secondary education. Spain.
A concise study reflecting the current concern about the misalignment between the worlds of education and employment which examines the various causal factors of this misalignment without being confined exclusively to the shortcomings of the education system. The author adopts the traditional correspondence between educational level and occupational level, at same time acknowledging its limitations; this has implications for the methodology behind the structure of his work: basic education, intermediate education and higher education. A concluding section examines manpower selection criteria with reference to the 'education' 'post to be filled' binomial.

Castillejo Brull, José Luis; Escamez Sancez, Juan; Sarramona Lopez, Jaime; et al.: **Educar para el siglo XXI; Critérios de evaluación para el uso de la informatica educativa**
Madrid. Ed. Fundesco. 1987, 220 pp.
ISBN 84-46094-27-5

Computer science. Audiovisual aids. Teaching machines. Teaching aids. Computer-assisted instruction/teaching methods. Learning process. Surveys. Technological change. Teachers. Students. Teacher training. Technical Education. USA. Spain.
A study, commissioned by Fundesco, on the applications of information technology in teaching. It addresses four aspects: (i) cognitive abilities, exploring the effects of information technology on the cognitive structures of the learner; (ii) attitudes, analysing the actions of the teaching personnel *vis-à-vis* information technology; (iii) typology, presenting a taxonomy of the experience gained with IT applications in schools and thereby drawing on survey work; (iv) finally, the issue of integration, addressing information technology within the context of science and technology teaching. The latter part includes a document on recent experience in this field in the USA.

San Miguel, J.: **Escuela-Empresa La Formación Profesional Mixta**
In 'Horizonte Empresarial' July/August, Madrid 1988, pp. 30-35.
ISBN 02012-0607
School-enterprise relationship. Educational systems. Educational levels. Retraining. Continuing education. In-plan training. Technological change. Technical education. Educational reform. Alternating training. Spain.
Reflections on the need for strong interlinkages between education and working life, this being understood as devising a concept which extends from primary education to higher education and then continues into continuing training and skill-update training.
The work highlights the importance of the role of the enterprise as a training site and also the importance of establishing a sound technical/vocational branch of education — at the same time keeping pace with technological innovation.

Flecha, Ramón; Tolosana, Carme; Del Rio Martin, Enrique; et al.: **De la Escuela al Trabajo**
In 'Cuadernos de Pedagogia', No 160, Madrid 1988, pp. 7-36.
ISBN 0210-0630
Transition from school to work. Vocational training. Educational reform. Teacher training. In-plan training. Curriculum. Experimental education. Employment services. Training of trainers. Information services. School-enterprise relationship. Training centres. Secondary education. Spain.
A collection of articles on the transition from school to working life. Those in the first section, more theoretical in nature, discuss the reform of education as a means of forging closer links between the worlds of education and employment at both European level and within Spain. A further article addresses the question of the education and training needed by a pupil venture out on to the labour market in terms of acquired skills and abilities. The remaining articles report on relevant concrete experiences from education centres — in particular vocational training centres — and from other contexts — a management training and employment promotion centre, a farm school and an adult education centre.

Duran i Farell, Pere; Racionero I Grau, Lluis; Majo I Cruzate, Joan: **Societat in Noves Professions**
Ed. Generalitat de Catalunya. Departament d'Ensenyament. Institut Catalá de Noves Professions, 1987, 40 pp.
Technological change. Society. Leisure. Sociology. Hours of work. Social change. Culture. Educational systems. Further education. Continuing education. Retraining. Developed countries.
Three conferences held on the theme 'Society and new occupations' explored possible development trends in society in the light of new technologies. The first addressed changes in the individual sphere; the second the effects in cultural terms and the availability of leisure time, and the third the need to ensure that the education system keeps pace with technological innovation.

Acero Saenz, Eduardo; Aparicio Fernandez, Juan M.: **La Technología: Una dimensión de la Cultura; Características y enseñanzas**
Madrid. Editorial Editepsa. July/October 1988, 207 pp.
ISBN 84-86867-00-2
Technology. Technical education. Secondary education. Culture. Educational reform. Capitalist countries. Socialist countries. Curriculum subjects. Spain.
The first part of this work addresses the characteristics of culture and its interactions with science, technology and labour. This is followed by a historical account of the various cultural phases from the technico-scientific viewpoint. This part concludes with an examination of the dualism of western and Soviet culture.
The second part looks at the subject of teaching technology from the cultural viewpoint. It charts out the approaches adopted in this respect in the capitalist countries and socialist countries, examining in detail in the case of Spain the development of this field of education and its role in current reform.
The document is supplemented by two annexes, one presenting examples of technology teaching projects in secondary education and the other investigating the proposed reform of secondary and vocational education.

F

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Introduction

The following bibliography includes recent research papers on the configuration of training and qualifications predicted by the year 2000 and on innovatory schemes for training in the 'new jobs' linked to the introduction of new technologies in the field of production.

Bibliography

Bernard, Daniel; Levy, Bernard; Rouge, Michel; et al.: **Nouvelles qualifications: les entreprises innovent avec des jeunes (T1: Bilan)**
Paris La Défense: Centre INFFO, 1988, 143 pp.
Centre INFFO — Tour Europe — Cédex 07 — Paris La Défense
Occupational qualification. Action research. Young people: 16 to 18 years old. Automation. Alternating training. France.
The 'New qualifications' operation was launched in 1984 by the Délégation interministérielle à l'insertion professionnelle et sociale des jeunes en difficulté. The aim of this action research was to identify new trades involving the use of new technologies with a view to formulating a new approach towards helping young unskilled people to enter working life, taking into account the changing distribution of functions at the workplace.
This review of the action research describes the procedure established, developments in job qualifications and practical arrangements for the organization of training. It ends with a review of the entry of young people into working life.

Fongecif de Champagne-Ardenne: **Le bac professionnel des techniques de maintenance des systèmes mécaniques automatisés, en CIF**

Formation Professionelle et Apprentissage, No 413, September 1988, pp. 17-22.
ISSN 0295-1975
Educational leave. Employees. Automation. France.
Fongecif, Champagne-Ardenne, has set up a course leading to a vocational baccalaureate in the maintenance of automated engineering systems for employees who left school several years previously with a CAP- or BEP-level certificate and who were taking educational leave to attend the course. This article describes how the scheme was set up and how it worked, citing comments from the students, teachers and employers concerned.

Betbeder, Marie-Claude: **La Grande Mutation des Lycées Professionnels**
Paris: Le Monde de l'Education, No 148, April 1988, pp. 58-63
ISSN 0337-9213
Vocational training. Educational reform. School-enterprise relationship. Teacher Training. France.
This dossier gives an overview of the changes currently being implemented within vocational lycées: the establishment of a vocational education stream in classes 3 and 4 on the technological side; the introduction of the vocational baccalaureate; ongoing in-service teacher training; the dynamic role played by employers. It also highlights the difficulties that remain in the framework of continuing change.

Bureau d'Information et de Prévisions Economiques (BIPE): **Les ouvriers qualifiés, les agents de maîtrise et les techniciens de l'industrie de l'an 2000**
Paris: Haut Comité Education Economie - 1987, 81 pp.
HCEE, 107 rue de Grenelle, 74357 Paris.
Forecasting. Training levels. Technicians. Skilled workers. Supervisors. Skills. France.
Produced by BIPE on behalf of Haut Comité Education Economie (HCEE), this study describes the training level needed for jobs as skilled workers, supervisors and technicians by the year 2000.
On the basis of the study, the HCEE makes recommendations for the restructuring of the initial training system.

Bureau d'Information et de Prévisions Economiques (BIPE): **Niveaux de formation à l'an 2000: les besoins des utilisateurs, des éléments de réponse pour l'Education Nationale**
Paris: Haut Comité Education Economie — 1987, 38 pp.
HCEE, 107 rue de Grenelle, 74357 Paris.
Forecasting. Training levels. Occupations. Skills. Educational systems. France.
Produced by BIPE on behalf of Haut Comité Education Economie (HCEE), this study attempts to predict the needs of the economy for each group of occupations by the year 2000 and their breakdown by levels of training. Based on the study, the HCEE sets out proposals on reforming the initial training system.

Cellule de Coordination du Réseau Jeunes et Technologies: **Réseau Jeunes et Technologies: premier bilan et éléments de réflexion**
ADEP: Noisy le Grand, 1987, 61 pp.
ISBN: 2-903054-39-8
Young people: 16-25 years old. Alternating training. Occupational qualification. Automation. France.
The training of young people of low educational attainment in the 'new trades' associated with the development of new technologies is the challenge taken up by Réseau 'Jeunes et Technologies', which offers some 60 job-skill training schemes.
This preliminary overview of the current experiment describes: developments in jobs; the partnership between training agencies and employers; the target group; learning strategies in a work situation; recognition of skills acquired and recruitment; and the challenges to training agencies.

IRL

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The relationship between general education and vocational training

Both the Irish educational sector and the vocational training authority share many common objectives in the preparation of young people for life and work. In recent times emphasis in these areas has increased because of rapid changes which have taken place due, in part, to the onset of the new technologies.

In the education and training areas there is now a greater awareness and a growing response to the changing needs of society. Irish Government policy as outlined in the 1986 White Paper on manpower planning is directed towards a more integrated approach towards education, training and industrial authorities.

Among a number of initiatives introduced as a result of this policy was one recently announced by the Irish Ministers for Labour and Education. It is called 'Youth Reach' and is an extension of the social guarantee programme jointly sponsored by these two government departments. Under the new plan, young people who leave school without qualifications will be offered 24 months' education and training on a combination of programmes to suit their particular needs.

The first year will be spent on a foundation programme which will be under the management of FÁS, the Irish Training and Employment Authority or the educational authorities.

The impact of new technology on the education and training areas has elicited a strong response. An example of this was the publication of a discussion paper by the curriculum and examination board relating to changes introduced into post-primary schools. More recently Eolas, the Irish Science and Technology Agency published its science budget entitled 'State investment in science and technology, 1987'.

Expenditure in the education and manpower sectors now accounts for 47.8% of the total government allocation to science and technology. This highlights the vital role of education and vocational training in the economic development of the State.

The interdependencies which link education and vocational training are becoming more apparent. Developments in technology, changing employment opportunities and patterns as well as increased leisure time call for more bridges between training and education. Irish Government awareness of these changes is reflected in the growing emphasis on initiatives and policies to stimulate such links.

Adult education in Ireland
Ó Murchú, Micheal W., European Centre for leisure & education. Studies and Documents No 21-22 1984.

Adult Learning. Education and training. Continuing education. Ireland.
This monograph describes the organization and structure of adult education in Ireland which evolved mainly in response to perceived individual, community and societal needs and aspirations.

State investment in science & technology, 1987. Eolas — The Irish Science & Technology Agency, Glasnevin, Dublin 9, 1988.

Educational statistics. Training statistics. Education and training. Ireland.
This report outlines the financial allocations by the Irish Government for the year 1987 to institutions engaged in any activity related to science and technology — the science budget for 1987.

Science, technology and the post-primary curriculum

The Curriculum & Examinations Board, 1987.

Information technology. Educational development. Curriculum development. Ireland.
The Curriculum and Examinations Board's discussion paper is a review of the post-primary curriculum in relation to science and technology. It considers the issues and strategies for a policy on science and technology education.

Journal article
'Laying the foundations for the future'
Hussey, T. D. Gemma, former Minister for Education, 'Focus' September 1985, pp. 12-13.
Vocational education. Education and training. Educational reform. Ireland.
This article refers to the right balance between education and training as necessary in order to maintain the tradition of liberal education supported by vocational preparation suited to 1990s and the new century.

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P

Documentation

Carneiro, Roberto: **A estratégia de formação num quadro de mudança**
Lisbon. 'Emprego e Formação', IEFP, No 2, pp. 5-13.
Education systems. Apprenticeship. School enterprise relationship. Training systems. Technical training. Portugal.
In the formulation of training policies, consideration must be given to rapid change, a feature of the times in which we are living. Consolidation of information, technological change, the new style of economic organization and lack of social organization, the ageing population and the generation gap are all major trends which must be considered when outlining these policies. In view of the information explosion, the education system will have to assume a new role in which it will become the nucleus of information organization and a means of training for the critical selection information, creating environments propitious to interaction between trainees with different backgrounds in the framework of apprenticeship. The role of initial training will tend to decline in importance, while continuing training and permanent education will gain momentum. Organization of teaching will be based on interaction between the trainee's different disciplines. The school will appear as a centre of an enormous, and ever growing, socially interactive training system.

Pires, E.: **A educação não-formal e os jovens**
Lisbon, O Jornal da Educação, Vol. X, No 100, 1987/88, pp. 18-19.
Education system. Youth. Social environment. Leisure. Continuing vocational training. Audiovisual methods. Continuing education. Pedagogics. Portugal.
Non-formal education, i.e. through the mass media, new technologies and leisure activities, provide wider knowledge than formal education. In order to ensure full development of manpower and motivate the participation of workers in society, links must be established between formal and non-formal education, non-formal education programmes must be defined and retraining programmes for teachers implemented.

Ministério da Educação (ME); Ministério do Emprego e da Segurança Social (MESS).
Escolas Profissionais
Lisbon, sn, sd, sp
Vocational schools. Regional development. Entry into working life. Training needs. Level of qualification: School enterprise relationship. Portugal.
Following an outline of the characteristics and objectives of vocational schools — which are principally aimed at providing young people with skills and are sponsored by local authorities and other bodies — this brochure describes the forms of management of these schools, their staffing stucture and operating system and indicates the categories of pupils who may attend them. The type of training provided, the fields covered, the recruitment of trainers and the training programme model are also described. After a summary of the levels of vocational qualifications in the EEC, the role of vocational schools in the development of the country is examined with a view to the single European market of the future.

Ministério da Educação (ME); Gabinete de Estudos e Planeamento (GEP)
A educação tecnológia no escolaridade obrigatória
Education. Teaching methods. Surveys. Portugal.
Lisbon, GEP, ME, 1988, 77 pp.
This publication, an attempt to compare the most significant aspects to be taken into consideration in the context of technological education of the future in Portugal, is divided into three sections: the first contains opinions on problems expressed at working parties, the second provides analyses of results obtained from students and the third gives opinions on the form of education technology to be used in Portugal in the future. The most important conclusions include the drastic improvement in qualitiy which shall be required to overcome the present technological deficit confronting us, a problem which must be tackled at once if it is not to become even more serious. Since those responsible for the implementation of the reform of the education system in Portugal are aware of the need to establish a dignified and dignifying method of teaching using technology, no further considerations will be necessary.

Comissão de Reforma do Sistema Educativo
Sistema educativo e formação profissional
Lisbon, ME, 1987, 85 pp.
Education systems. Education development. Education policy. Vocational training. Transition into working life. Regional development. Regulation. Portugal.
This publication contains the papers presented at the 'Education System and Vocational Training' seminar sponsored by the Comissão de Reforma do Sistema Educativo (Committee for the Reform of the Education System) at Oporto on 19 and 20 February 1987. In the light of the new social, economic and cultural situations and the new horizons introduced by the Law on the Bases of the Education System, the technical and vocational issue is one of the principal education problems of the envisaged reforms. The principal aspects involved are: I — Training Policy in the Law on the Bases of the Education System (Campos, Bartólo Paiva); II — The Law on the Bases and Vocational Training (Teixeira, Manuela); III — Vocational Training and Regional Development (Braga da Cruz, Luìs); IV — School and Preparation for Work (Imaginario, Luís); V — Vocational Technical Education and its future development (Azevedo, Joaquim). The seminar programme can be found in the annex.

Comissão de Reforma do Sistema Educativo
Novas tecnológias no ensino e na formação
Lisbon, ME, 1988, 105 pp.
Education. Distance study. Technology. Teacher training. Portugal.
The texts in this report relate to new technology in teaching and education and refer to the different aspects associated with the use of audiovisual, printed and computer-based teaching material. Attention is drawn to the various problems caused by the extensive introduction of these technologies into the education system, i.e. questions relating to equipment, the training of personnel, organization and problems related to the design and production of materials of these media. The opinions of the following authors (who constitute the Working Party appointed by the Comissão de Reforma do Sistema Educativo are expressed throughout the report): Armando Rocha Trindade (coordinator). António Manuel Baptista, Altamiro Barbosa Machado, Maria Emília Ricardo Marques, José Dias Lopes da Silva, Maria Leonor Machado do Sousa, José Manuel N. Salvador Tribolet.

Legislation:

Law no 46/86: **Lei de Bases do Sistema Educativo**
Lisbon, 'Diário da República', I Serie, No 237, 1986, p. 3067-3081.
Education system. Education reform. Education and training. Portugal.
This law establishes the general framework for the Portuguese education system — a combination of measures rendering possible the right to education, this education being ensured by providing permanent training designed to promote the overall development of the individual, social progress and democratization of society. The system is provided by a combination of structures and different activities, on the basis of the initiative and under the responsibility of various public, private and cooperative bodies and institutions. The system includes pre-school education, school education and out-of-school education. Vocational training, in addition to complementing preparation for working life initiated in basic education, is designed to ensure complete integration into working life via the acquisition of the knowledge and vocational skills required to meet the nation's needs in terms of development and technological evolution. The law also defines those who have access to vocational training, the organization of courses and their function.

Names and addresses

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Av. 5 de Outubre No 20
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IEFP — Instituto do Emprego e Formação Profissional
Av. José Malhoa, No 11
1000 Lisbon

MESS — Ministério de Emprego e da Segurança Social
SEEFP — Secretaria de Estado do Emprego de Formação Profissional
Praça de Londres, No 2, 15th floor
1091 Lisbon Codex

Comissão Coordenadora da Região Norte
Dra Adelaide Oliveira
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AIP/COPRAI — Associação Industrial Portuguesa/Departamento de Produtividade, Formação Profissional e Desevolvimento Tecnológico
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Gleeson, D.: **TVEI and secondary education: a critical appraisal.**
Milton Keynes: Open University Press 1987, 200 pp.
ISBN 0-335-15538-3
Education. Vocational training. Curriculum. Secondary schools.

Examines fundamental issues associated with the implementation of the Technical Vocational Education Initiative (TVEI) and explores its effects on schools and colleges at the practical level. TVEI represents a distinct break with hitherto accepted models of curriculum development and reflects a 'new' approach to the ways in which the government structures educational priorities at the local level.

Further Education Unit (FEU); Replan
Preparing adults: an appraisal of college-based MSC-sponsored adult preparation courses.

London: FEU 1987, 52 pp.
ISBN 1-85338-019-9
Curriculum. Adult education. Evaluation. Training courses.
Summary report evaluating two MSC-sponsored adult preparation courses. The project aimed to review the development of courses in MSC - related provision and to investigate clients' needs and their implications for revised curricula.

Love, J.: **Training together: brings better access for employers.**
Pickup in progress, autumn 1987, p. 18 (7 pp.)
ISSN 0263-936X
Training. Further education. Higher education. Teaching methods. Education.

The education world is changing as colleges, polytechnics and universities are looking beyond their traditional role of teaching school leavers on full-time courses to providing flexible, part-time training programmes for working adults. The Pickup programme is aiming to increase this type of training, and growth can be seen by the number of training consortia that have been set up. The consortium is a group of colleges, polytechnics and universities working together to provide a team approach to the provision of training and consultancy to local firms. This article also provides a list of consortia that have been set up.

Greenall, J.: **Training through open learning.**
Training technology: today and tomorrow, 1 (2) Oct. 1987, p. 21 (3 pp.)

Training. Education. Distance study. Technology. Technological change.
The Open University has led the way for further development in training and education. This article looks at ways that commerce and industry are benefiting from open learning and argues that changing technology presents new opportunities for trainers and educators to exploit.

Davies, H.; Rispin, M.: **The role of academia in providing training for industry.**
Journal of further and higher education, 11 (1) Spring 1987, p. 45 (13 pp.)
ISSN 0309-877X
Industry. Training. Organizations. Education.
A variety of recent reports have emphasized the poor performance of British industry with respect to training. However, although Pickup initiatives have stimulated a good deal of research on the organization and marketing of training within academic institutions, and on the internal barriers to the development of training activity, very little is known about employers' real needs or their relationship with academia. The article attempts to look outside the educational institutions at the perceived needs of industry, and at employers' perceptions of the educational sector, drawing upon work carried out for the Humberside small-scale local collaborative project (LCP).

Davies, E.; Mattes, D.: **Ladders to success.**
Employment Gazette 95 (8), Aug. 1987, 72
ISSN 0309-5045
Vocational qualifications. Vocational training. Boards of Examiners. Training administration. Training schemes.
Order is being brought into Britain's confusing array of vocational qualifications through the introduction of the national vocational qualification. Some of the rungs of this new ladder are already in place and this article examines both what they are and where they are likely to lead.

Forbes, S.; Miller, J.: **What should employers ask of the education system?**
Personnel management, March 1988, p. 32 (5 pp.)
ISSN 0031-5761
Examinations. Educational systems. Employers.
Looks at the demands of jobs in the near future and how well the present schemes like GCSE, TVEI and CPVE might meet them. Also discusses whether a subject-based education defined by a national curriculum will be what employers want and need.

Lewis, R.: **The Open College and industry.**
Open College (OC)
Training technology: today and tomorrow, 1 (4) April 1988, p. 23 (4 pp.)
ISSN 0952-0503
Distance study. Training. Industry. Employers. Education.
Open learning is perceived as providing a flexible opportunity for individual self-development, and Open College is making a major contribution to this. This article explains how the Open College is working with employers to ensure maximum benefit from OC courses and outlines support measures available to industry.

Eggleston, J. (ed.): **Work experience in secondary schools.**
London: Routledge and Kegan Paul 1982, 150 pp.
ISBN 0-7100-9219-2
Work experience. Training systems. Secondary schools.
Gives accounts of work experience schemes in Britain, Australia, Ireland and the USSR. An extended editorial introduction examines both the reasons for providing work experience in schools and the underlying social and economic issues.

Alderson, D.: **Education and training: time for unity.**
Training tomorrow, June 1988, p. 22 (2 pp.)
Education. Training. Education and training. Skills. Government.
Article taking a wide-ranging look at education, training and qualifications, and suggesting that while much good work is being done by the MSC there is a need for initiatives to come from the top in government. It is suggested that perhaps a merger of the DE, DES and DTI could provide the answer!

Smith, R.: **How education is learning to change.**
Transition, July 1988, p. 18 (3 pp.)
ISSN 0267-8950
Education. Management. United Kingdom
The education sector is often accused of being slow to react to changing requirements but growing demand has resulted in a number of important changes in education. This article examines these changes and the way that the education sector is moving forward.

DeVille, H.G.: **Review of vocational qualifications in England and Wales: a report by the working group April 1986.**
London: HMSO 1986, 61 pp.
ISBN 0-11-270590-1
Education. Training. Youth. Vocational training.
Report of the working party set up following the White Paper 'Education and training for young people' to review vocational qualifications in England and Wales.

Hart, P.E.: **Youth unemployment in Great Britain.**
National Institute of Social and Economic Research
Cambridge: CUP 1988, 142 pp.
ISBN 0-521-35348-3
Youth. Unemployment. France. Federal Republic of Germany. Employment. United Kingdom.
Study aiming to formulate and justify policies to reduce youth unemployment. It discusses the main economic theories and looks at supply and demand for young labour. Also provides a comparison with young labour markets in France and the Federal Republic of Germany, a survey of employment in retailing, and examines the North-South divide in youth unemployment.

Finn, D.: **Training without jobs: new deals and broken promises, from raising the school-leaving age to the Youth Training Scheme.**
Basingstoke: Macmillan 1987, 242 pp.
ISBN 0-333-36509-7
Education. Employment. Training. Youth. School leaving.
Looks at the way that the State has prohibited children from obtaining full-time employment and has assumed increasing control over the conditions awaiting school leavers in the labour market. Traces educational developments from the introduction of compulsory schooling to the creation of the two-year YTS, and examines the way that the Conservative Government has redefined the relationship between education, training and work.

Book reviews

The members of the CEDEFOP documentary information network were also invited to furnish bibliographical references on recent publications in their countries.

CEDEFOP

EuroTecNet. Vocational training and new technologies: **jobs, enterprises, methods, policies**
Commission of the European Communities. Directorate-General for Employment, Social Affairs and Education, summary of joint research, by G. Fragniere, Maastricht (NL), Presses Interuniversitaires Européennes: 'EuroTecNet', Series No 6, 267 pp. + annexes, bibliography. Languages: EN, FR
ISBN 90-5201-002-1
Vocational training. Advanced technology. Non-traditional occupations. Economic sectors. Small and medium enterprises. In-plant training. Open learning. Distance study. Modular training. Technology. Production. Human resources. Regional planning. Training systems. Training policy. EEC countries.
This volume is a revised, summary version of the first four reports in a joint research series which constitutes one of the main elements of the EuroTecNet programme. The texts present the results of the work conducted by the research teams on the following priority subjects: new occupations and sectors of activity, employers' (or groups of employers) participation in in-firm training, the development of individualized training, distance study and modular systems of training, and regional and local management of human resources as part of forward-looking management of the labour market. The report concludes by describing training policies and objectives and perspectives at European level.

The social dimension of the internal market
Social Europe, special issue, Luxembourg: Office for Official Publications of the European Communities, 1988, 115 pp. + annexes + statistical tables. Languages: EN, FR, DE, ES, IT
ISBN 92-825-057-4
EC Commission. Labour mobility. Occupational mobility. Student mobility. Social mobility. Skilled workers. Discrimination. EC law. Small and medium enterprises. Economic sectors. Educational innovations. Regional planning. Social partners. Statistics. EEC countries.
The Commission, aware that the social dimension of the internal market, especially with a view to its completion in 1992, is a prerequisite for its success, has commissioned a group of inter-departmental officials to carry out exploratory work.
This special issue of 'Social Europe' is the report of this working group on the social aspects of the internal market, taking into account everything that has been achieved within the framework of the social dialogue as well as the various components of social policy already launched.
NB: This report contains numerous statistical tables with sectoral, regional, industrial, employment, education, training, etc. data.

B

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Centre intercommunautaire de documentation pour la formation professionnelle

Smet, R.; Klein, U.; Van De Beek, J.; 'etc'
Didactiek van het onderwijs voor volwassenen: inzonderheid het modulair gestructureerd onderwijs voor sociale promotie Brussels, Ministerie van Onderwijs, 1987, 35 pp. Koningsstraat 138, B-1000 Brussels
Modular training. Continuing vocational training. Industrial training. Training of trainers. Project method. Federal Republic of Germany. Région flamande. Région bruxelloise. Belgium.
On 10 June 1987 a workshop was held at NV Siemens in Oostkamp to consider the pedagogical and didactic modernization of modular training for social advancement. The complementarity of the technician and the educationalist in the framework of a didactic approach adapted to adults is illustrated by three articles on:
- the training of instructors in 'project- and transfer-oriented training' (Petro) at Siemens in Germany;
- didactics for a modular system of adult education;
- systems theory as a didactic method (as applied to the internal combustion engine).

Heene, J.; Verhaeghe, J.P.; Brusselmans-Dehairs, C.:
Nationale onderzoeksacties ter ondersteuning van FAST. Onderwijs en leerkrachten: mutaties en perspectieven — Onderzoeksrapport
Brussels, Diensten voor Programmatie van het Wetenschapsbeleid, Seminarie en Laboratorium voor Didactiek, Rijksuniversiteit Gent, 1987, 52 pp. + appendices, Wetenschapsstraat 8, B-1940 Brussels
Information technology. Schools. Teachers. Teaching aids. Computer-assisted instruction. Computer sciences. Teacher training. Proposals. Pilot projects. Région flamande. Région bruxelloise. Belgium.
Following an outline of current policy and research on new information technologies in education in Flanders, the study, on the basis of an analysis of the problem proposes a scenario for the improvement of the efficiency of teaching aids available in schools.
Hypotheses are developed on the way in which the conclusions drawn are connected with typical features of the school system, and their implications at pedagogical/didactic and social level are indicated. This is followed by hypotheses on what should be done in order to improve cost-effectiveness. The study concludes with a proposal for a project in which the proposed action is put to the test in day-to-day school life: an action study in a number of pilot schools. This document reports on one of the national research projects in support of the FAST programme.

GR

ΠΑΙΔΑΓΩΓΙΚΟ ΙΝΣΤΙΤΟΥΤΟ

Martinos, Ch.: **Tokikoi foreis epimorfosis stin Ellada: Themata programmatismou kai syntonismou**
(Local training agencies in Greece: analysis of issues and proposals for planning and coordination)
Ekpaidefsi kai epangelma, Vol. 1, No 3, October 1988, pp. 179-188
ISSN 1011-3622
Planning of training. Labour market. Further training. Ministry of labour. Public employment services. Greece.
An article on some general issues in the light of experience acquired from the compilation of data on the planning and implementation of further training programmes in the Prefectures of Grevena, Chios and Magnesia, Greece. It makes suggestions as to possible action in response to these issues and describes a set of problems in the three Prefectures that must be taken into consideration before the proposed schemes can be implemented.
(The same report was submitted to the Technical Cooperation Services of the OECD in February 1988.)

Ti egine ston tomea tis isotitas apo to 1981 eos simera
(Achievements in equality of the sexes since 1981)
Ypoyrgeio Proedrias tis Kyvernisis/Geniki Grammateia Isotitas (Ministry of the Presidency/General Secretariat for Sex Equality), Athens, 1988.
Sex discrimination. Women. Women's status. Female roles. Legislation. Greece.
A book on progress in the field of sex equality from 1981 to the present. Innovations in social services, vocational training curricula, institutional changes, etc.

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Diagnóstico de la situación actual y perspectivas de desarrollo de Gijón
Gijón. Ed. Ministerio de Educación y Ciencia — Dirección General de Promoción Educativa, 1988, 94 pp.
Demography. Educational statistics. Labour statistics. Primary sector. Secondary sector. Tertiary sector. Educational levels. Schooling. Educational supply. Occupational structure. Training statistics. Community development. Spain.
A working document on the situation of Gijón based on statistical material from various sources which is intended to provide a forward-looking view of economic activity, employment and training as the point of departure for a strategy of coordinated action for urban development.
The document has an introductory chapter followed by information on the following: the demographic situation; the economic situation by sector; education levels and training opportunities; and finally information on the origins of the development project for Gijón within the context of the network of local initiatives.

La política de empleo en España Informe de base sobre instituciones procedimientos y medidas de política de empleo
Madrid. Ed. Ministerio de Trabajo y Seguridad Social. Centro de Publicaciones, 1988, 132 pp. ISBN 84-7434-471-9
Employment policy. Unemployment. Labour market. Employment opportunities. Employment creation. Employment legislation. Labour contract. Employment statistics. Further training. Unemployment insurance. Vocational training. Part-time employment. Collective bargaining. Social partners. European Communities. Employment services. Spain.
Structured in the same manner for all 12 Member States of the European Communities as participants in Misep (Mutual Information Systems on Employment Policies), this report has four chapters. The first describes governmental institutions engaged in the field of employment policy. The second examines the legal instruments, the institutions embodying industrial relations and the procedures which govern the labour market, the principles of placement policy, the Placement Agency, and the types of job opportunity available. The following chapter examines measures to promote employment under the following classification: global, safeguarding employment, protection against unemployment, targetted to specific categories of the workforce, employment distribution, training, retraining, occupational mobility, and placement. The last chapter is a description of the statistical sources on employment and unemployment and the organizations responsible for analysing the labour market. There are two annexes: one presenting basic employment statistics and the other information on Misep.

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Aballere, François; Froissart, Catherine:
L'évaluation qualitative, une approche appliquée à la formation
Noisy le Grand: ADEP, 1988, 80 pp.
ADEP, Le Central 430, La Courtine — Mont-d'Est,
93160 Noisy le Grand, Tel. 43 04 98 76
Training evaluation. Methodology. France.
This practical guide to the 'qualitative evaluation' of training programmes has been commissioned by the Délégation à la Formation Professionnelle. It describes the approach formulated in the light of an evaluation of schemes launched under 'youth' programmes. Its scope is not, however, limited to a given type of course or a specific target group. It proposes a methodology and, in its cross-referenced layout, provides guidelines for its implementation. It is indexed so that it is possible to find definitions of the main concepts included in the publication.

Délégation Interministérielle à l'Insertion Professionnelle et Sociale des Jeunes en difficulté (DIIPJS)
Pour les politiques locales d'insertion des jeunes
Paris: DIIPJS, May 1988, 32 pp.
DIIPJS, 71 rue Saint-Dominique, 75007 Paris, Tel. 45 55 92 48
Vocational guidance. Young people: 16 to 25. France.
'Local missions' set up by DIIPJS, the interministerial delegation for the vocational and social integration of young people in difficulty, have helped 350 000 young people since 1982. This is a DIIPJS review of the situation in the series entitled 'Pour des politiques locales d'insertion des jeunes' (Local policies on youth integration), covering the position, role and prospects of the guidance and support units. It analyses the target group receiving support from local missions in 1986, describing its characteristic features and developments, its main activities and trends, the issues at stake, the value and possible content of local youth integration policy, and the role of local missions as a link with these policies and as an instrument for their implementation.

Jean-Gabriel Meilhac: **Bilan d'activité des permanences d'accueil, d'information et d'orientation**
Noisy le Grand: ADEP, 1988, 26 pp. + annexes.
(ADEP, Le Central 430, La Couratine — Mont-d'Est, 93160 Noisy le Grand, tel. 43 04 98 76.)
Vocational guidance. Young people: 16-25 years old. France.
The 624 'permanences d'accueil, d'information et d'orientation' — 'support, information and guidance centres' — operating in France catered for 140 000 young people form April to December 1987. Set up by a decree of March 1982, these facilities are now serving broader target groups and have expanded their activities. This nationwide summary on the position and role of the centres in the provision for the integration of young people was commissioned by the Délégation à la Formation Professionnelle. It contains a quantitative and quality review of their work.
Brief particulars are given on the target groups, the support agencies for the centres and their inter-institutional nature, participation by the centres in planning courses, significant schemes, how a centre is run and the training of its leaders. The annexes include a set of statistical tables.

Danvers, Francis:
Le conseil en orientation en France
Paris: EAP, 1988, 272 pp.
Editions EAP, 6 bis rue André Chénier, 92130 Issy les Moulineaux, Tel. 46 45 38 12
Vocational guidance. Educational guidance. Guidance officers. Vocational counselling. France.
This study outlines the history of vocational guidance within schools from 1914 to the present time. In the second part it tackles the subject of vocational counselling: the definition of the concept, its practice, other counselling practices in the school system and the theory and practice of vocational development.
Bibliographical references, a review of legislation, data on guidance services and information on ACOF (Association des Conseillers d'Orientation de France — the French guidance officers' professional association) complete the work.

IRL

McCorry, Mary: **Women and the need for training**
Women's Education Project, 143a University St., Belfast, 7. 1988 UKL 2.50
Education and training. Economics of training. Training needs. Female employment. Ireland/N. Ireland.
This research report examines the training and retraining needs of women in Northern Ireland. The report attempts to discover whether there is a link between the current levels of training and women's disadvantaged position in the Northern Ireland labour market. It questions whether membership of the European Community has had any beneficial effects on training provision for women.

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Vasco Faustino: **Super-hits, Ferreira**
Lisbon, 'Emprego e Formação' No 6, 1988, pp. 33-51.
Apprenticeship. Alternating training. Education and training. Training employment relationship. Financing of training. Youth. France. Italy. Federal Republic of Germany.
This article, the first part of a more detailed study, examines the systems used for organizing apprenticeship in three Community countries (Federal Republic of Germany, France and Italy). The variety of information provided indicates the type of experiments conducted in the field of education and training of young people, thus permitting comparisons with the situation in Portugal. A subject of particular interest, this heterogenous description has provided information on many aspects, thus providing a better framework in which to situate problem which is extremely topical.

UK

A partnership in learning. How to implement effective employer/college partnerships for adult training.
IPM/Pickup project
London: IPM, 1985, 58 pp.
Higher education. Further education. Adult education. Employers attitudes.
This research project was commissioned because of the concern expressed by members of the IPM's National Committee for Training and Development that the boundary and relationships between employing organizations and colleges of higher and/or further education have been far from adequate. The results show that good resources available in colleges are not generally being used effectively by employers in their own development activities with their own employees. But, although it is not widely appreciated, much good work is being done.

Junankar, P.N.(ed.): **From school to unemployment.**
University of Essex
Basingstoke: Macmillan, 1987, 310 pp.
ISBN 0-333-39843-2

Unemployment. Youth. Education. Ethnic groups
Based on original research on growing youth unemployment in OECD countries. The major conclusion is that growing youth unemployment is due to a lack of aggregate demand. Youth unemployment is concentrated among a small group, those with poor educational qualifications, from poor backgrounds, and from ethnic minorities.

Kedney, B; Parkes, D.: **Implications of the 1988 Education Reform Act: perspectives from administrators and managers.**
Further Education Unit (FEU)
London; FEU, 1988, 83 pp.
ISBN 1-85338-080-6

Education. Educational reform. Legislation. Further education.
Set of articles looking at the implications of the Education Reform Act on further education. Responses to the act and the effect that the act will have on FE differs with each article; the articles argue cases and identify implications but also remind FE of where it should be heading.

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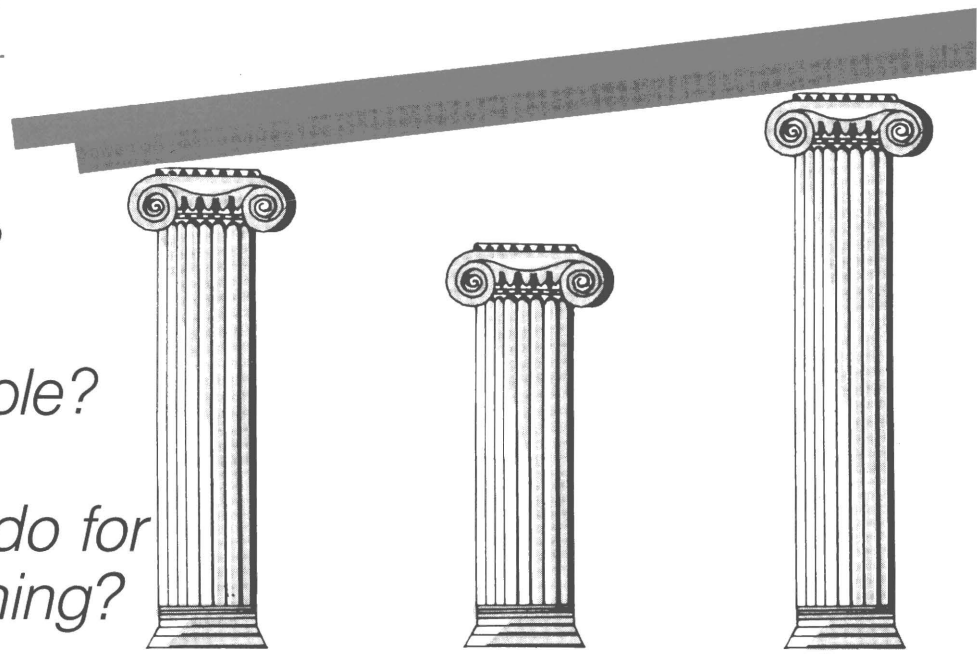

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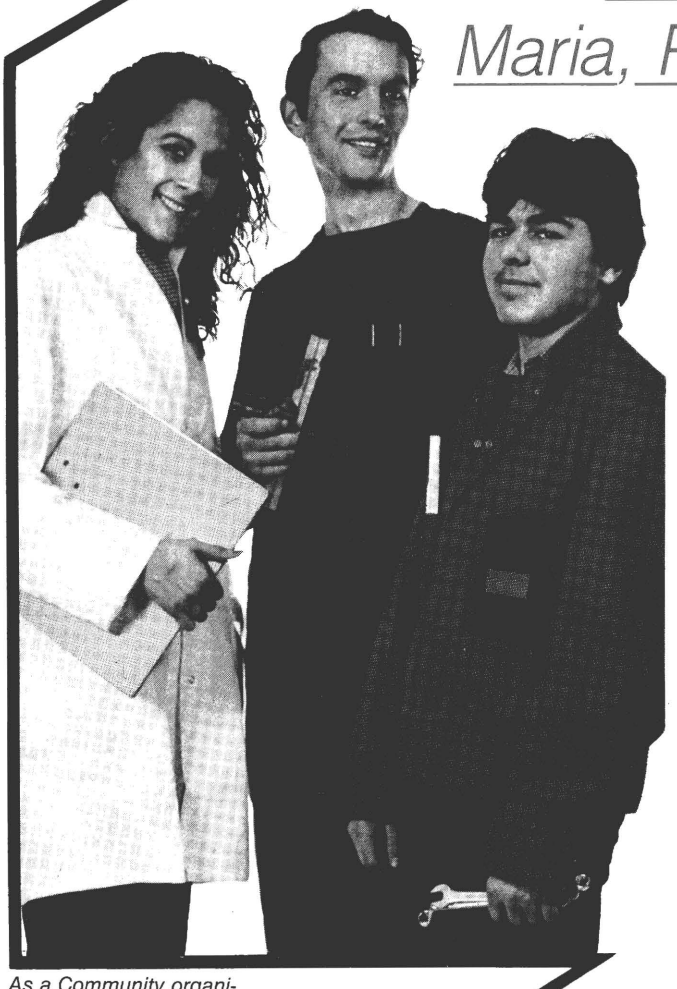

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